

ADDITIONS TO THE SOUTH AFRICAN SPECIES OF PHTHIRIINAE
AND USIINAE (DIPTERA: BOMBYLIIDAE) WITH KEYS TO ALL THE
KNOWN SPECIES

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(With 3 figures)

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INTRODUCTION

The acquisition of additional material by more intensive field work and collecting, on the part of the South African Museum since my revision of the South African Phthiriinae (Hesse 1938: 822-866), necessitates the descriptions of quite a number of new species, the recording of undescribed sexes of species described from one sex only, and the correction of observations made on inadequate material.

It is also to be noted that since my revision of this subfamily, in which the genera *Phthiria* Meigen, *Apolysis* Loew and *Oligodranes* Loew were accommodated, Hull (1973: 194, 212) has transferred the two genera *Apolysis* and *Oligodranes* to the subfamily Usiinae which was formerly primarily based on the genus *Usia* from the Mediterranean Region and North Africa. The former subfamily Phthiriinae of authors thus becomes restricted to the genus *Phthiria*.

DESCRIPTIONS

Subfamily **Phthiriinae** Becker

Genus *Phthiria* Meigen

Phthiria: Hesse, 1938: 824. Hull, 1973: 195-199.

Phthiria laeta Bezzi

Phthiria laeta Bezzi, 1921: 96. Hesse, 1938: 831, fig. 248a.

The acquisition of additional ♀♀ and the as yet undescribed ♂ of this species throws an entirely different light on the identity of the species and necessitates not only additional observations to facilitate its recognition, but

also the correction of a taxonomic error made in allocating to it a variety (*xerophila*) which actually belongs to an entirely different species.

The species, both ♂ and ♀, may be recognized as follows:

Body on the whole less humped and broader than in other species, mainly black in ♂, only narrowish hind margins of sternites pallid; broadish hind margins of tergites on sides in ♂ appearing greyish white, due to greyish white tomentum; knees in ♂ yellowish; following parts in ♀ very pale yellow or yellowish white: the broadish occipital margin behind eyes continuous on each side with a broadish streak on each side of frons, extending down entire genae (excepting only for a black spot or streak on each side of antennae), the entire buccal cavity, entire head below (except for a short, central, basal, abbreviated, dark streak), the shoulders, sides of thorax above, slightly more than basal half of scutellum, broad hind margins of tergites (broader on sides), entire pleurae (except for dark lower part of mesopleuron, dark spot on anterior lower part of pteropleuron, a dark spot on anterior upper part of sternopleuron, the black lower parts or halves of sterno- and hypopleurae, and some infusions around base of halteres), the very broad, or almost entire, hind margins of sternites, and the coxae; legs in ♀ slightly more ochreous yellow, only hinder parts of trochanters, extreme apices of tibiae, and apices of tarsal joints, or sometimes apical halves of latter, darkened.

Vestiture with the hairs relatively sparse, a little denser in ♂, entirely white in ♂, slightly more sericeous yellowish on head above, occiput above and thorax above anteriorly in ♀; sparse scaling, where present, silvery whitish in ♂, and yellowish or golden above in ♀.

Head with the anterior and genal part not tumidly prominent; antennal joint 1 very short, subequal to joint 2; joint 3 (cf. Hesse 1938, fig. 248a) spindle-shaped, in profile slightly broadened at about middle above and again below nearer apex, but not humped, its lower apical process slightly thicker and projecting slightly more than upper one, the two together forming an almost symmetrical bifid process; proboscis about 2–2,8 mm, more slender in ♂.

Scutellum markedly broad and transverse, more so than in most other species, broadly rounded behind, its width being a little more than twice its length.

Wings greyish hyaline, with yellowish brownish, brownish to reddish-brownish veins; knobs of halteres entirely pallid in ♀, darkened above in ♂.

Legs with the basal joint of hind tarsi only about or a little more than half length of hind tibiae.

Length of body: about 4–4,5 mm

Length of wing: about 4,5–5 mm

Distribution

Transvaal (♂ allotype from Johannesburg (Zumpt, 24 December 1950)); Natal.

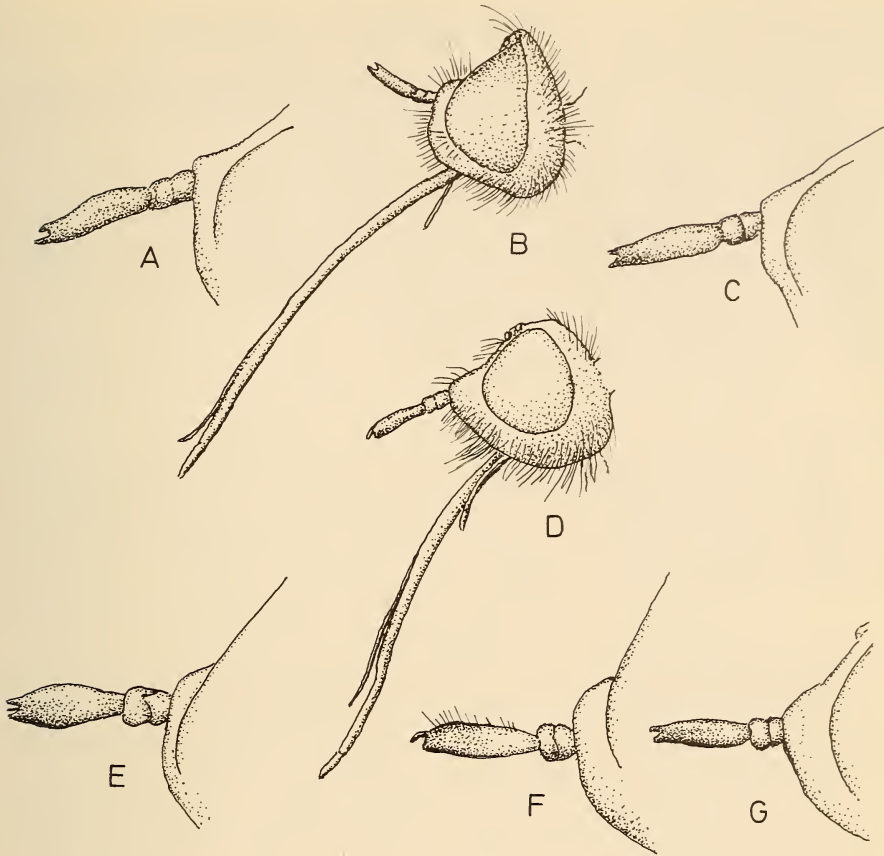


Fig. 1. Left side views of antennae and heads of some new species of *Phthiria*. (Antennae to the same scale, the heads to a smaller scale.)

A. ♀ *hesperia*; B. ♂ *nitidigena*; C. ♀ *flaviscuta*; D. ♀ *conocephala*; E. ♂ *ovalicornis*; F. ♂ *brunnescens*; G. ♀ *namaquensis*.

Phthiria flaviscuta sp. nov.

Fig. 1C

This species may almost be considered as only a distinct western Cape or southern Karoo variety of *laeta*. In the absence of the ♂ these ♀♀ are however placed as a separate species. Compared with the ♀ *laeta* they agree and differ in the following respects:

Body slightly smaller, with the same pattern of yellow, disposed in the same way, but the entire scutellum discally yellow and the yellow hind margins of tergites distinctly narrower, occupying less than apical halves of tergites on sides; legs with more darkened parts, the upper surfaces of front femora and sometimes a subapical infusion on inner or upper apical parts of the others,

outer faces of all the tibiae, and the greater part of tarsi darkened. The left antenna is shown in Figure 1C.

Vestiture with the hairs and scaling, especially on thorax above and tergites, distinctly longer and denser, and distinctly more yellowish or golden; fine hairs and scaling on frons denser, more golden.

Wings very similar, but relatively shorter; knobs of halteres with a distinct dark spot above and tending to be darkened above in outer part.

The species appears to be slightly variable; some specimens have no lateral extension of the black on frons in front, and in others the legs are much darkened.

From 4 ♀♀ in the South African Museum.

Length of body: about 2,5–4 mm

Length of wing: about 3,5–4,5 mm

Distribution

Little Karoo: Oudtshoorn-Zebra (Museum expedition, October 1951) (holotype); Vanwyksdorp (October 1937); Spitskop near Meiringspoort (Museum staff, November 1935). South-western Cape: Franschhoek (Barnard, December 1932).

Phthiria hesperia sp. nov.

Fig. 1A

This species, represented by a ♀ specimen only, may eventually prove to be only a western form of *flaviscuta*, but in view of the absence of the ♂ and its distinct type of third antennal joint, it is referred to a separate species which differs from the ♀♀ of *laeta* and especially *flaviscuta* in the following respects:

Antennal joint 3 (cf. Fig. 1A) ending in an upper process which is much farther away from the apex, distinctly much more subapical in position and conspicuously less developed and thinner than the relatively stout lower apical process, but both these processes however more developed than in *laeta* and *flaviscuta*.

Central black fascia on frons not extending fascia-like laterally on frons in front as in *laeta*; yellow on sides of thorax anteriorly above as broad as in *flaviscuta* and broader than in *laeta*; entire scutellum yellowish as in former species; legs with the front femora and the other femora more extensively yellowish than in *flaviscuta*, and tibiae on the whole also more extensively yellowish, not so darkened on outer surfaces; hairs on legs apparently shorter and less developed than in *flaviscuta*; knobs of halteres without a distinct dark spot or infusion laterally above.

From a ♀ holotype in the South African Museum.

Length of body: 3,76 mm

Length of wing: about 3,88 mm

Length of proboscis: about 2 mm

Distribution

Western Cape: Leipoldtville (Museum expedition, November 1956).

Phthiria pulla Bezzi

Phthiria pulla Bezzi, 1922: 78. Hesse, 1938: 847.

Phthiria fallax Hesse, 1938: 836, fig. 250 (n. syn.).

Phthiria flavigenualis Hesse, 1938: 837, fig. 251 (n. syn.).

Phthiria laeta var. *xerophila* Hesse, 1938: 831, fig. 248b (n. syn.).

A long series of both ♂♂ and ♀♀ of a species of *Phthiria* from the Little Karoo and also the Great Karoo, obtained since the publication of my revision, has convinced me that the ♂♂ of the species in question are in fact the species *pulla* of Bezzi which he described from a ♂ specimen from Willowmore.

As I suspected in 1938 (p. 838) there is no doubt that my *flavigenualis*, described from 4 ♂♂, is identical with *pulla*. The single ♂ specimen, described as *fallax*, appears to be merely a colour variety and should also now be considered as a synonym of *pulla*.

The long series of ♀♀ in this collection obviously belong to the same species as the ♂♂ and constitute the as yet undescribed ♀ sex of *pulla*. Moreover the ♀♀ of my *laeta* var. *xerophila* also do not differ specifically from the above-mentioned newly-acquired ♀♀. In this case there is also no doubt that my *laeta* var. *xerophila* (both ♂ and ♀) represents a slight colour variety of *pulla*.

A more complete description of this slightly variable species *pulla*, as based on both sexes, is as follows:

Body in ♂ mainly black, only the narrow hind margins of sternites obscurely whitish or pallid, and last sternite infused with yellowish or reddish-yellow to a variable extent; body in ♀ with the following parts pale yellow to ochreous yellow: almost entire head (except the dark part on occiput surrounding the neck, the black ocellar region, an obscure dark central streak on frons of variable width and intensity to frontal depression, a dark spot on each side of antennae, the dark antennal joints 2 and 3, and the dark proboscis), broadish sides of thorax above, continuous anteriorly with a narrowish submedial dorsal line or streak on each side which often isolates a roundish dark humeral spot and another more transverse dark spot just above wing-bases, base of thorax to a variable extent, entire scutellum, greater part of pleurae (except the dark or black lower halves of sterno- and hypopleurae, the dark parts surrounding base of halteres, and usually some small obscure dark spots below wing-bases, and sometimes a darkish streak or infusion across lower part or half of mesopleuron), almost entire abdomen (except the dark or black bases of tergites, especially centrally and discally above), and the coxae; narrowish hind margins of tergites in ♀ tending to be more pallid or yellowish whitish, and the basal parts more orange or yellowish red; legs in ♂ black, but with rather conspicuous yellowish or reddish-yellow knees, with the entire femora, tibiae and bases of tarsi yellowish in one colour form (described by me as var. *xerophila*), and with only apices of femora, entire middle and hind tibiae, upper surfaces of front tibiae and bases of tarsi yellowish in another colour form (described as *fallax*); legs in ♀ entirely yellowish, only apices of tibiae and tarsi (or apical parts of tarsi) darkened.

Vestiture with the hairs and scaling relatively short and very sparse in typical ♀, but distinctly longer and denser, especially on abdomen of some ♀♀ (described as var. *xerophila*), the hairs in ♀ distinctly more yellowish, sericeous yellowish to pale golden on body above; vestiture on body and legs in ♂ much denser and longer than in ♀, entirely whitish or sericeous white, apparently denser in some ♂♂ with yellowish or partly yellowish legs (those described as var. *xerophila* and *fallax*); the ♂ more often with a greyish white tomentum or pruinescence which appears as broadish greyish white transverse band across hind margin on sides of tergites.

Head not tumidly prominent anteriorly; antennal joint 1 short, transverse, not longer than joint 2; joint 3 broadened at or near middle to a variable extent, subspindle-shaped, without any longish hairs above, its apical processes about equally long and prominent, the lower one a little broader at base, both together forming a more or less symmetrical bifid process; proboscis about 1,4–2,6 mm long, stouter in ♀.

Wings greyish hyaline, without a milky whitish tint; veins brownish to dark brown or even blackish-brown; middle cross vein at about, or a little beyond, middle of discoidal cell; knobs of halteres usually entirely pallid or pale yellowish above, but in some ♂♂ sometimes with a tendency to be slightly darkened on outer margin above.

Legs with the basal joint of hind tarsi usually longer or much longer than half length of hind tibiae.

Length of body: about 3–5 mm

Length of wing: about 3,5–5 mm

Distribution

Koup Karoo, Tankwa Karoo, Little Karoo, Great Karoo, and Namaqualand.

The synonymic names may be retained as varietal names for the various colour forms as indicated in brackets in the description above.

From the material before me it is evident that the typical *pulla* (syn. *flavigenualis*) occurs mostly in the Little Karoo and Great Karoo. The other colour form, *pulla* var. *fallax*, in which the ♂ has yellowish tibiae and the ♀ has denser hairs on the abdomen, appears to occur in the Koup Karoo and adjacent parts of the Great Karoo, extending into Namaqualand in the west where it is replaced by the variety *xerophila*, with entirely yellowish legs in the ♂. Still another, more southern, form of *pulla*, from the region between the Little Karoo and south Cape, may be added here:

Phthiria pulla var. *anomalcera* n.

The ♂ of this form differs from the ♂ of *pulla* Bezzi s.str. in being slightly smaller; antennal joint 1 distinctly longer, nearly twice length of small transverse joint 2; proboscis relatively shorter, only about 1,5 mm long; abdomen

without distinct, or with less conspicuous, bands of greyish tomentum across hind margins of tergites on sides; last sternite entirely dark or black; and with the knobs of the halteres entirely very dark or black above.

From a ♂ in the South African Museum.

Distribution

South Cape: Uniondale District (Museum expedition, October 1952).

Phthiria varipes sp. nov.

This species obviously belongs to the South West African *crocogramma* and *cognata* section (Hesse 1938: 833, 835) in which the ♀♀ have very dark or black legs, less yellow on pleural parts, relatively narrower yellow hind margins across tergites, often rather broadish wings, and a third antennal joint in which the upper apical process is shorter, less developed and apparently farther back than lower one.

It is nearer *crocogramma* which type of species it represents in South Africa. Though having the yellow on its body disposed in the same way, it differs from the latter in the following respects:

Body distinctly smaller; entire occiput behind eyes in at least its upper half black, not with yellow eye margins; base of thorax entirely black like rest of thorax above; anterior spiracular part below humeral angle without any, or scarcely any, yellow; yellow hind margins of tergites distinctly narrower.

Head with the lower apical process of antennal joint 3, though longer, or projecting more, than upper one, not markedly stouter as in *crocogramma*; proboscis distinctly much more slender, much shorter, only about 2 mm long.

Wings more vitreous hyaline, without the faint, but distinct, subopacity of *crocogramma*.

Legs with the front coxae more yellowish-brown in front in apical part, not entirely black; femora not entirely or uniformly dark, but with more pale yellowish-brown on inner and upper faces in more than their basal halves, and the knees not so broadly yellowish.

From a ♀ holotype in the South African Museum.

Length of body: about 3 mm

Length of wing: about 4 mm

Distribution

Moordenaars Karoo, north-west of Laingsburg (Museum staff, March 1937).

Phthiria pubescens Bezzi

Phthiria pubescens Bezzi, 1921: 98. Bezzi, 1922: 77-78. Hesse, 1938: 839. (♀ only.)

In my revision of the South African species of *Phthiria* I referred a ♂ specimen from 'Weenen in Natal (Thomasset, March-April 1924)' to this species, at the same time ignoring an undescribed ♂ specimen referred to the

same species by Bezzi and which was supposed to be in the Hungarian Museum, but which I could not identify from Bezzi's references and unsatisfactory key (Bezzi 1922: 77). This ♂ in any case no longer exists for the dipterous collections in that museum were destroyed by fire during the revolution of 1957.

Since the publication of my revision another ♂ and two ♀♀ from the same locality and obtained by the same collector as the above-mentioned ♂ have come to my notice. The differently coloured ♀♀, which obviously belong to the same species as the ♂, prove that my interpretation at the time was wrong and that the ♂ specimen described by me as the ♂ of *pubescens* is not the ♂ of that species. It, together with the other ♂ and the ♀♀, are described below as a new species.

The ♂ of *pubescens* Bezzi s.str. is therefore still unknown and this species is still represented only by the unique ♀ specimen, labelled by Bezzi, in the South African Museum.

Phthiria tinctipennis sp. nov.

Phthiria pubescens (♂ only) Hesse (nec Bezzi), 1938: 839, fig. 252 (n. syn.).

As mentioned under the preceding species, a ♂ specimen from Weenen in Natal was, in the absence of the true ♀, wrongly described by me as the ♂ *pubescens* Bezzi. It, together with another ♂ and 2 ♀♀ from the same locality and collected at more or less the same time by the same collector, as well as a slightly aberrant or varietal ♂ from the Transvaal, constitute a distinct and separate species which is characterized and differs from other known South African species as follows:

Body in ♂, including legs, mainly black, the legs sometimes however slightly more brownish or even yellowish brown, especially the front and middle ones; the following parts in ♀ very pale yellowish or ivory yellowish: sides of frons, genae, head below narrowly on sides along eye margin to about or nearly halfway up behind eyes in occipital part, sides of thorax above (except for a gap just above wing-bases), entire discal part of scutellum, propleural callosity above front coxae, a broadish pleural fascia along nearly upper half of sternopleuron across lower hinder part of pteropleuron up to base of halteres, metapleural part at same level, almost entire tergites 2 and 3, very broad hind margins of rest of tergites, and the very broad hind margins of sternites; buccal rim in ♀ dark or blackish; legs in ♀ almost entirely yellowish, only the tarsi, or at least their apical halves, darkened.

Vestiture with the hairs and scaling mainly whitish, longer and denser in ♂, more sericeous yellowish on abdomen above in ♀.

Head with the front part not tumidly prominent or swollen; antennal joint 1 very short, transverse, about as long as, or only very slightly longer than, 2; joint 3 not distinctly spindle-shaped, only a little narrowed apically and basally, with distinct bristly hairs above, its lower apical process quite prominent, even a little more prominent than upper one, the two together however forming a distinct bifid process; proboscis about 2-2.4 mm long.

Wings distinctly, though faintly, dusky, tinted yellowish brownish subapically to even brownish throughout, distinctly more so than in any other known South African species; veins yellowish-brown or reddish-brown; knobs of halteres darkened above, sometimes more so in ♀.

Hypopygium of ♂ as that figured in figure 252 (Hesse 1938: 840) erroneously referred as belonging to *pubescens* Bezzi.

From 3 ♂♂ and 2 ♀♀ (♂ holotype in British Museum (Natural History), ♀ allotype in South African Museum).

Length of body: about 3,5 mm

Length of wing: about 4-4,5 mm

Distribution

Natal: Weenen (Thomasset, March–April 1924) (♂ holotype, ♂ paratype, and ♀ paratype); Weenen (Thomasset, November 1928–March 1929) (♀ allotype). Transvaal: Potchefstroom (Zumpt, 26 December 1952) (♂ paratype).

From *crocogramma* Hesse, which it very closely resembles, it may at once be distinguished by the distinctly more dusky wings, relatively shorter discoidal cell, darkened halteral knobs, yellowish legs in ♀ and not distinctly yellowish knees in ♂, much shorter proboscis, more symmetrical bifid apex of antennal joint 3 in which the upper apical process is not so markedly subapical in position.

The ♀ which also superficially resembles *laeta* Bezzi, may at once be distinguished from the latter by the distinctly dusky wings, the distinctly narrower and less transverse scutellum and which is entirely yellow on disc, the narrower and more humped body, less extensive yellow on pleurae, etc.

Phthiria nitidigena sp. nov.

Fig. 1B

Body in ♂ entirely black; legs sometimes more dark sienna brownish to blackish-brown; integument of body, especially above and especially frons, genae, head below, thorax above, scutellum, and abdomen above, markedly or brilliantly shining, without any greyish white pruinescence.

Vestiture, as in most other ♂♂ of *Phthiria*, longish, but not very dense; hairs on ocellar tubercle, frons, and genae black or dark; short ones on abdomen above and longer ones on genital structures also dark; longer and sparser ones on abdomen above and on scutellum pale, slightly straw-coloured yellowish; rest of hairs on body and legs, especially denser ones on head below, sides of tergite 1 and on venter, more whitish; fine hairs or hair-like scaling on tibiae dark, and fine longish hairs on apical parts of femora also appearing dark in certain lights.

Head (cf Fig. 1B) with the front part rather protruding spout-like, the frons and genae broad, convex, tumid, much like those of *lanigera*, but to a lesser extent; antennal joint 1 short, transverse, not longer than 2; joint 3 more parallel-sided than in most other species, equally broad throughout, not

humped or spindle-shaped, with some distinct fine hairs above, ending apically in a slightly longer lower process and a shorter upper process which is slightly farther back; palps apically slightly spear-blade-shaped; proboscis slender, about 2,4–2,7 mm long.

Wings very feebly greyish hyaline, without a very distinct subopacity, iridescent; veins pale yellowish brownish; middle cross vein a little beyond middle of discoidal cell; knobs of halteres entirely whitish.

Legs with the basal joint of hind tarsi distinctly much more than half length of hind tibiae.

From 3 ♂♂ in the South African Museum.

Length of body: about 4 mm

Length of wing: about 4,25–4,5 mm

Distribution

South-western Cape: between Leipoldtville and Elands Bay (Museum expedition, November 1948).

The markedly shining frons, genae, scutellum and upper parts of the body, spout-like anterior part of the head, dark hairs on frons and genae, and the parallel-sided third antennal joints easily distinguish this species from most of the known South African species.

Phthiria lanigera Bezzi

Phthiria lanigera Bezzi, 1921: 97. Hesse, 1938: 840, fig. 253.

This characteristic Cape species, which appears to be a montane species, is subject to variation and a distinct variety of it, described below, has since been taken together with the more typical form.

Phthiria lanigera var. *melampogon* n.

This variety differs from the typical form of *lanigera* in the following respects:

Vestiture with the hairs on frons, genae, and antennal joints 1 and 2 above in ♂ distinctly very much denser and longer, those on frons, antennae above, and upper part of genae black (those on frons and entire genae in typical ♂ distinctly less dense and entirely white); hairs on upper part of genae in ♀ also, very much denser, black, not white, and extreme upper part of genae on sides of antennae, though also black and shining, not entirely smooth as in *lanigera*, but with some black hairs; hairs and woolly scaling on body above in varietal ♀ paler yellowish sericeous or pale brassy yellowish, not so golden or deep golden yellowish.

Wings distinctly and more conspicuously milky whitish; veins also distinctly paler, more yellowish brown or yellowish, not brown or blackish brown; knobs of halteres in ♀ ivory whitish or yellowish above.

The varietal form also has antennal joint 3 relatively thinner or more

slender basally, and the knees are either not, or scarcely, or at least less conspicuously, yellowish.

From 5 ♂♂ and 9 ♀♀, including the ♂ holotype and ♀ allotype, in the South African Museum.

Length of body: about 5,12–6,4 mm

Length of wing: about 5,4–5,52 mm

Distribution

South-western Cape: Wit River Valley in Bainskloof near Wellington (Museum expedition, December 1949) (♂ holotype, ♀ allotype, and paratypes); Wit River, Bainskloof (Barnard and Lawrence, November 1922); Wit River, Bainskloof (Barnard, November 1937) (♂ and ♀ paratypes).

Phthiria nigribarba Hesse

Phthiria nigribarba Hesse, 1938: 843, fig. 255.

Of this species, which I described from only 2 ♂♂ in 1938, the South African Museum has since obtained not only a number of other ♂♂, but also a series of the as yet undescribed ♀. Supplementary notes on the species and a description of the ♀ can now be added as follows:

Body entirely black in both sexes, appearing greyish white, especially markedly so in ♀, due to a conspicuous greyish white pruinescence; hind margins of sternites sometimes, even in ♂♂, very obscurely and narrowly pallid; basal part, or half, of palps yellowish in ♀ to yellowish brownish or sienna brownish in ♂; legs variable in colour, varying from entirely yellowish in some ♀♀ to yellowish tibiae and tarsi, and yellowish brown, brown, to sienna brownish femora in other ♀♀, and from entirely dark reddish or sienna brownish femora with yellowish knees in some ♂♂ to paler yellowish brown in others.

Vestiture with the hairs rather dense and long in both sexes, denser and shorter on body in ♀, on the whole much like those of *lanigera*; hairs in upper part of occiput, on ocellar tubercle, frons, and genae much denser and longer in ♂ and black, entirely sericeous white in ♀ like rest of hair on body and legs in both ♂ and ♀.

Head with the anterior part in ♂ tumidly prominent and swollen as in ♂ of *lanigera*; this part in ♀ less swollen, but with the upper part of genae and the frons nevertheless broader and more convex than in other species, excepting those in the *lanigera* section; antennal joint 1 short, subequal to, or scarcely longer than, 2; joint 3 spindle-shaped or humped, without distinct hairs above, its upper apical process distinctly longer than lower one, slightly curved, but relatively less stout than in *lanigera*; proboscis about 2–2,6 mm long, stouter and relatively shorter in ♀ than in ♂.

Wings conspicuously milky whitish in both sexes, with very pale yellowish or pallid, to almost white, veins; middle cross vein much beyond middle of discoidal cell; veins enclosing anal cell markedly straight; anal cell with its

apical stalk relatively long in both sexes, usually longer than apical cross vein of discoidal cell; knobs of halteres entirely pallid or very pale in both sexes.

Length of body: about 3,5–5 mm

Length of wing: about 3,5–5 mm

Distribution

South-western Cape: Malmesbury (Brauns, October 1926) (type material); Klipheuwel near Cape Town (Zinn, October 1950) (♂♂ and ♀♀ and ♀ allotype).

Phthiria ovalicornis sp. nov.

Fig. 1E

A species very near *nigribarba* and also belonging to the *lanigera* section. It agrees with and differs from *nigribarba* in the following respects:

Body also entirely black in both sexes, also covered with a very conspicuous greyish white pruinescence in ♀; palps dark; legs much darker, even in ♀, blackish brown to black, sometimes more sienna brownish in ♀, only the knee-articulations sometimes reddish brown.

Vestiture very similar to that of *nigribarba*, but the hairs in ♀ distinctly denser than in ♀♀ of latter; dark hairs on ocellar tubercle, frons and genae in ♂ distinctly less dense and shorter, and in ♀ much sparser and shorter in this species, but also entirely sericeous white, like rest of hair on body and legs, in both sexes; hairs in occiput in ♂ also whitish, not dark as in ♂ of *nigribarba*.

Head in ♂ in front, especially genal parts, very similar to that of *nigribarba* and *lanigera*, but somewhat less tumidly prominent, less evident in ♀ where the genae are much shorter than in *nigribarba*, though the frons is broader, more convex than in ♀♀ of most species of *Phthiria*; antennal joint 1 (cf. Fig. 1E) also short, not visibly longer than 2, sometimes tending to be even shorter; joint 3 (cf. Fig. 1E) relatively shorter, characteristically oval or spindle-shaped, broadest at about, or just before, middle, slightly hollowed or depressed on inner side from just before middle and with some fine hairs above, more distinct in ♂, the upper apical process of joint relatively shorter than in *nigribarba*, but nevertheless stouter and slightly longer than lower one; palps relatively shorter, less projecting; proboscis 1,8–2,4 mm long.

Wings also conspicuously milky whitish, with yellowish veins which are however sometimes less pallid or whitish; second submarginal cell markedly acute basally, more so than in any other of the known South African species; middle cross vein much beyond middle of discoidal cell; knobs of halteres entirely pallid or whitish, but in some ♂♂ tending to be darker above.

Legs with the basal joint of hind tarsi distinctly very much longer than half length of hind tibiae, much more so than in *nigribarba*.

From 12 ♂♂ and 12 ♀♀ (♂ holotype, ♀ allotype and ♂ and ♀ paratypes) in the South African Museum.

Length of body: about 3,5–4,5 mm

Length of wing: about 4–4,5 mm

Distribution

North-western Karoo: Augusfontein near Calvinia (Museum expedition, September 1947).

Phthiria brunnescens sp. nov.

Fig. 1F

Another species in the *lanigera* section characterized as follows:

Body in ♂ entirely black; legs very dark blackish brown or dark sienna brownish, only the knee-articulations paler, more yellowish brown.

Vestiture with the hairs dense in ♂, but rather short, differing from ♂♂ of all other known South African species in having not only the hairs on head and occiput entirely black, but also dark ones intermixed on thorax above and on scutellum, short dark hairs on abdomen above, and blackish brown or dark ones on coxae and legs; the paler hairs on thorax above, to a certain extent on pleurae, and on sides of abdomen beyond tergite 1 gleaming more yellowish to pale yellowish brownish; with even the more whitish ones on mesopleuron, sides of tergite 1, and on venter gleaming more sericeous yellowish in certain lights.

Head with the frons and genae slightly tumidly prominent or inflated, placing the species at once into the *lanigera* and *nigribarba* section; antennal joint 1 short, subequal to, or only very slightly longer than, joint 2; joint 3 (cf. Fig. 1F) humped as in the *lanigera* section, but slightly beyond the middle, with distinct and conspicuous hairs above, ending apically in a slightly curved process, slightly longer and stouter than lower process; proboscis about 2 mm long; palps rather long, longer than antennae.

Wings greyish hyaline, with a slight subopacity, but not conspicuously milky whitish as in the *lanigera* section; veins yellowish brown; middle cross vein at about, or only a little beyond, middle of discoidal cell; knobs of halteres darkened above.

Legs with the basal joint of hind tarsi distinctly much more than half length of hind tibiae.

From a ♂ specimen in the South African Museum.

Length of body: about 4 mm

Length of wing: about 4 mm

Distribution

South-western Cape: Citrusdal District (Museum expedition, November 1948).

Phthiria namaquensis sp. nov.

Fig. 1G

A species which is also referable to the *lanigera* section on account of the structure of its third antennal joint and its milky whitish wings, but in which the head in front is not markedly inflated or tumidly prominent. It is characterized as follows:

Body and legs black in ♂ and also mainly so in ♀; the following parts in ♀ pallid or yellowish: a short transverse streak on each side in frontal depression, more or less lower half of genae, continued as a narrow streak along margin of eyes on head below and halfway up behind eyes in occipital part, the small boss-like prominence in middle of pleurae between sterno- and hypopleurae and pteropleuron and sometimes to a certain extent even adjacent parts of sterno- and metapleurae, and very narrow hind margins of sternites; knees in both sexes pallid or yellowish; integument of head and body in both sexes densely covered with greyish white bloom, on thorax above in longitudinal streaks and on abdomen above, especially in ♂, as greyish white rings across hind margins of tergites.

Vestiture with the hairs fairly dense, more so and longer in ♂, but relatively less so than in other species of this section, entirely sericeous whitish, but in ♂ with some hairs in occiput above behind eyes, those on ocellar tubercle and frons dark and, in ♀, also with some hairs on frons in front dark.

Head with the anterior part in ♂ not so obviously tumid as in *nigribarba* or even *brunnescens*, but with the frons and upper part of genae, even in ♀, slightly broader or more convex than normally so; antennal joint 1 very short, transverse, subequal to joint 2; joint 3 (cf. Fig. 1G) more or less subparallel-sided, not distinctly humped, without distinct hairs above, its upper apical process slightly, but distinctly, longer and stouter than the conspicuous lower one; proboscis about 1,6–2,2 mm long, not very much stouter in ♀ than in ♂.

Wings with a distinct milky whitish tint; veins brownish or dark brown; middle cross vein a little beyond middle of discoidal cell; apical stalk of anal cell, especially in ♀, tending to be shorter than in most other species; knobs of halteres, even in ♀, darkened above to a variable extent.

From 4 ♂♂ and 4 ♀♀, including the types, in the South African Museum.

Length of body: about 3–4 mm

Length of wing: about 3,5–4 mm

Distribution

Namaqualand: Papendorp (Museum expedition, October 1950) (♂ holotype and ♀ allotype); Wallekraal (Museum expedition, October 1950) (3 ♂ and 3 ♀ paratypes).

Phthiria conocephala sp. nov.

Fig. 1D

A species also belonging to the *lanigera* section as far as the shape of the third antennal joint, the milky whitish tinted wings and rather dense vestiture are concerned, but the front part of head is very similar to that of *pilirostris*

It is characterized as follows:

Body and legs in ♀ mainly black; a narrowish streak on each side of frons, more than lower half of genae, entire head below, excepting only a central dark streak, pale yellow, this pale yellow also continued as a narrow streak

behind eyes, halfway up occiput and then continued as hind margin of eye itself, as a propleural spot above front coxae, a spot next to it just behind base of anterior coxae, a streak along middle of pleurae from posterior upper part of sternopleuron, lower part of pteropleuron, across upper part of hypopleuron, metapleural part in front of and just below halteres, and to a lesser extent also upper anterior angle of pteropleuron below wing-base; small area below wing-base ferruginous.

Vestiture with the hairs and scaling relatively dense and long, especially on genae, head below, on abdomen, and on femora, predominantly sericeous or silvery whitish, but those on front part of frons and upper parts of genae dark or black.

Head (cf. Fig. 1D) front markedly conically produced and narrowed apically, more so than in ♀♀ of *lanigera* and *nigribarba* section, more like that of ♀ *pilirostris*; buccal cavity sloping backwards; antennal joint 1 a little, but distinctly, longer than 2, about $1\frac{1}{4}$ times length of 2; joint 3 not very distinctly humped, only slightly broadened beyond middle, without distinct hairs above, its upper apical process stouter and longer than the lower feeble prominence, slightly curved down; proboscis about 2,2 mm long.

Wings distinctly tinted milky whitish; veins brownish or yellowish brown; middle cross vein much beyond middle of discoidal cell; apical stalk of anal cell rather long, very slightly longer than apical vein of discoidal cell; squamae conspicuously pallid or yellowish white; knobs of halteres with a small dark spot basally above.

Legs the basal joint of hind tarsi only about half length of hind tibiae.

From a single ♀ specimen in the South African Museum.

Length of body: about 4,4 mm

Length of wing: about 4,2 mm

Distribution

Coastal part of western Cape: Graafwater (Museum expedition, October 1947).

REVISED DESCRIPTIVE KEY TO THE KNOWN SOUTH AFRICAN SPECIES OF *Phthiria*

♂♂

- 1 (a) Proboscis without any hairs or dense hairs on labral part; apical part of head beyond anterior level of eyes to antennal insertions distinctly less conically prominent, produced, or narrowed, or pointed apically, appearing less tilted upwards; buccal cavity not straightly and steeply sloping backwards; abdomen without or with comparatively much narrower yellowish hind margins to tergites and, if more broadly yellowish, proboscis without hairs above 2
- (b) Proboscis with distinct, conspicuous, fairly dense, and longish hairs on basal half above on labral part; apical part of head beyond anterior level of eyes to antennal insertions more markedly conically prominent, produced and narrowed or more pointed apically, appearing more tilted upwards; buccal cavity distinctly more straightly and steeply sloping obliquely backwards; abdomen with relatively broad and conspicuous yellowish hind margins to both tergites and sternites

♂ *pilirostris* Hesse

- 2 (a) Antennal joint 3 more spindle-shaped, or tending to be more or less equally broadened above and below at broadest part, appearing less distinctly humped, ending apically in an upper and lower spine-like process, with either both tending to be equally developed, together forming a more symmetrical bifid process, or the lower one is distinctly stronger, more prominent; head in front of eyes less markedly tumid or inflated in appearance, the frons being narrower and upper parts of genae also relatively narrower, less bulging or inflated; wings, even if appearing slightly hyaline, tinted cinereous or even dusky, without, or with only a very feeble, subopaque milky whitish tint; hairs on head and body on the whole less dense, usually shorter and often sparse, those on legs also shorter, less dense and often poorly developed or almost absent 3
- (b) Antennal joint 3 tending to be more distinctly humped above, sometimes conspicuously so, ending in a distinctly stronger, longer, and sometimes curved down, upper spine-like process which is always stronger than the feebler or much reduced lower one, the two together not symmetrically bifid; head in front usually distinctly more markedly tumid or inflated, the frons relatively broader, more convex, and upper genal parts also broader, more bulging and inflated and, if not, other characters conform; wings usually clear hyaline, rarely without a very distinct, or even conspicuous, subopaque milky whitish tint; hairs on head and body, also legs, on the whole much denser, more shaggy and often longer 10
- 3 (a) Last sternite mainly yellowish or more conspicuously yellowish; legs entirely or predominantly pale yellowish, or at least tibiae and bases of tarsi mainly pale yellowish 4
- (b) Last sternite entirely dark or black, or not distinctly yellowish; legs entirely black or dark, or more yellowish brown or brownish than pale yellowish, only knees sometimes narrowly yellowish or pallid 5
- 4 (a) Entire femora, tibiae, and bases of tarsi yellowish. . . ♂ *pulla* Bezzi var. *xerophila* Hesse
- (b) Only apices or apical parts of femora, entire middle and hind tibiae, upper surfaces of front tibiae, and bases of tarsi yellowish . . . ♂ *pulla* Bezzi var. *fallax* Hesse
- 5 (a) Body relatively broader and thorax distinctly less convex above, less humped; scutellum markedly transverse, distinctly very much broader than long, at least twice as broad as long; basal joint of front and hind tarsi, especially of latter, only about, or only a little more than, half length of hind tibiae; knobs of halteres darkened above in apical half ♂ *laeta* Bezzi (nec Hesse 1938: 826)
- (b) Body distinctly narrower, the thorax distinctly more convex, more humped; scutellum distinctly less transverse, very much narrower, more conically narrowed apically, more convex and, though broader than long, usually considerably less than twice as broad as long; basal joint of front and hind tarsi, especially of the latter, much, or very much, more than half length of tibiae; knobs of halteres more extensively, or entirely, pale above and, if dark above, other characters conform 6
- 6 (a) Anterior part of head with the frons and genal parts narrower and shorter, less spout-like; antennal joint 3 usually broadened at about, or a little beyond, middle, more spindle-shaped or humped; apical joint or part of palps only slightly broadened, not spindle-shaped or spear-blade-shaped; frons and genal parts not entirely or conspicuously shining, usually duller, or in part covered with whitish or greyish tomentum, and body also distinctly less shining or predominantly duller due to greyish white tomentum; hairs on frons and genae, and fine ones on abdomen above, mainly pale or whitish 7
- (b) Anterior part of head with the frons and genal parts broader and longer, more protruding spout-like; antennal joint 3 more parallel-sided or equally broad; apical joint or part of palps distinctly more spear-blade-shaped; frons and genal parts, and even head below, more conspicuously brilliantly shining and body above, including abdomen, distinctly more shining, without greyish tomentum; hairs on frons and genae, and fine ones on abdomen above, dark or black. . . ♂ *nitidigena* sp. nov.
- 7 (a) Wings clearer, more vitreous hyaline, without a very distinct subopacity and, if so, this is only very faint and scarcely perceptible, milky whitish; middle cross vein tending to be nearer middle of discoidal cell; latter relatively shorter, only a little

more than twice as long as broad; head in front and body above much duller, less shining; antennal joint 3 without distinct hairs above, usually with the apical processes more equally developed; knees narrowly, or to a variable extent, pallid or yellowish 8

- (b) Wings less clear, with a more distinct yellowish whitish, cinereous yellowish or greyish brownish subopacity, sometimes even uniformly dusky; middle cross vein distinctly more, or even much, beyond middle of discoidal cell; latter relatively much longer, much more than twice, to nearly or even about 3 times, as long as broad; head in front, especially upper genal parts, and body above on the whole tending to be more shiny; antennal joint 3 usually with some distinct, or even conspicuous, hairs above, usually with the lower apical process distinctly more developed; knees not always yellowish and, if so, other characters do not differ. . . 9

- 8 (a) Antennal joint 1 short, transverse, slightly shorter than, subequal to, or scarcely longer than joint 2; proboscis longer, usually more than 1,5 mm; knobs of halteres entirely pale or pallid above, or only darkened to a very limited extent; sides of tergites with broad bands of greyish tomentum across apical halves; last sternite tending to be reddish or yellowish to a variable extent ♂ *pulla* Bezzi

(syn. *flavigenualis* Hesse)

- (b) Antennal joint 1 distinctly longer, elongate, nearly or quite twice length of small transverse joint 2; proboscis shorter, only about 1,5 mm long; knobs of halteres entirely dark or blackish above; sides of abdomen or tergites without distinct, or at least conspicuous, transverse apical bands of greyish tomentum; last sternite entirely dark ♂ *pulla* var. *anomalcera* n.

- 9 (a) Wings more elongate, clearer, greyish hyaline, with a slight whitish or yellowish whitish subopacity; veins paler, more yellowish; middle cross vein more beyond middle of discoidal cell which itself is relatively longer; proboscis longer, about 3-3,5 mm long; knees distinctly contrastingly yellowish; buccal rim and genae not separated by a very distinct groove ♂ *crocogramma* Hesse

- (b) Wings relatively shorter, distinctly slightly infuscated, dusky or tinted yellowish brownish to even brownish throughout; veins darker, more reddish brown; middle cross vein only a little beyond middle of discoidal cell which itself is relatively shorter; proboscis shorter, relatively stouter, less than 3 mm long; knees not pallid or yellowish, but front and middle legs sometimes yellowish brownish; buccal rim and genae separated by a more distinct groove ♂ *tinctipennis* sp. nov.

(syn. ♂ *pubescens* Hesse nec Bezzi)

- 10 (a) Anterior part of head, comprising frons and genae, distinctly much more prominent, more conspicuously inflated or tumid, the frons and genae being also distinctly very much broader; antennal joint 3 markedly broadened, distinctly more humped, its upper apical spine distinctly more developed, much longer and stouter than lower process and usually more curved downwards; hairs on frons, genae and on body as a whole distinctly denser, often more woolly; whitish or greyish pruinescence on body less developed; knees, excluding the articulations, not pallid or yellowish; last sternite longer, more elongate and scoop-like 11

- (b) Anterior part of head distinctly less prominent, less conspicuously tumid or inflated, the frons and genae being distinctly much narrower; antennal joint 3 subparallel-sided, or at least not so conspicuously broadened or humped, its upper apical spine only slightly, though distinctly, stronger than the relatively well-developed lower one; hairs on frons, genae, and body slightly less dense; whitish or greyish pruinescence on body on the whole more conspicuously developed; knees, including articulations, more distinctly pallid or yellowish; last sternite distinctly shorter

♂ *namaquensis* sp. nov.

- 11 (a) Wings distinctly and conspicuously subopaquely milky whitish; middle cross vein very much beyond middle of discoidal cell; hairs on body and legs, excepting only on head in front in some forms, entirely or predominantly very pale or whitish; antennal joint 3 usually humped at middle, or only a little beyond middle . . . 12

- (b) Wings greyish hyaline, without any, or with only a feeble scarcely perceptible, whitish subopacity; middle cross vein at about, or only slightly beyond, middle of discoidal cell; hairs on head and occiput, intermixed ones on thorax, on scutellum,

- disc of abdomen above, coxae, and legs very dark or black, those on thorax above and to a certain extent on pleurae, and on sides in apical half of abdomen gleaming more yellowish or yellowish brownish; antennal joint 3 tending to be humped nearer apex ♂ *brunnescens* sp. nov.
- 12 (a) Antennae longer, stouter, with joint 1 distinctly much longer, at least $1\frac{1}{2}$ to 2 times length of 2, with longish and dense hairs on both 1 and 2; joint 3 characteristically and prominently arched or humped at about, or just beyond, middle, with conspicuous hairs above, ending apically in a strong, finger-like, curved down, upper process, dwarfing the slight lower apical prominence; wings rather more pointed apically, the upper cubital branch ending apically at wing-point; veins dark brown to blackish brown; knobs of halteres more extensively darkened or black above; hairs on head, body, and legs distinctly and markedly much denser, longer, and more woolly or shaggy 13
- (b) Antennae proportionally shorter, with joint 1 very much shorter, scarcely, or only a very little longer than, or subequal to, as long as, or even a little shorter than joint 2, with very much shorter, or only very short and less dense, hairs on 1 and 2; joint 3, though also humped or broadened, less strongly developed, without any, or with much feebler and shorter, hairs above, ending apically in a less stout and shorter process, less markedly curved down, forming a more bifid process with an also relatively prominent lower process; wings more rounded apically; veins paler, more yellowish or pallid and, if dark, other characters conform; knobs of halteres either entirely yellowish or pallid above, or with less extensive darkening above; hairs on head, body, and legs distinctly shorter, less dense, less woolly or shaggy . . . 14
- 13 (a) Hairs on frons and genae entirely white and distinctly less dense; antennal joint 3 tending to be thicker basally; veins in wings darker; knees more distinctly, even though obscurely, yellowish ♂ *lanigera* Bezzi (typical)
- (b) Hairs on frons, antennae above, and upper halves of genae black and distinctly denser; antennal joint 3 tending to be thinner basally; veins in wings tending to be paler, more yellowish or with more yellowish; knees not perceptibly yellowish
♂ *lanigera* var. *melampogon* n.
- 14 (a) Second marginal cell in wings not acuminate or acute at base; anterior part of head distinctly more bulging, inflated, or tumidly prominent, the frons and genae being longer (or broader), length of genae at broadest part on sides of head quite, or nearly, half length of eye at same level; antennae relatively longer, joint 3 distinctly and relatively longer, more spindle-shaped, its upper apical process longer and stouter relative to lower one to a variable degree; palps proportionally longer, more projecting; hairs on head in front and on body distinctly denser and longer; scutellum on the whole more acute or pointed apically; basal joint of hind tarsi about, or only a little more than, half length of hind tibiae 15
- (b) Second submarginal cell distinctly more acute or acuminate at base; anterior part of head distinctly less prominently inflated or tumid, the frons and genae being shorter (narrower), the length of genae at broadest part on sides of head very much less than half, only about, or nearly a little more than, a third length of eye at same level; antennae relatively and proportionally shorter, joint 3 distinctly more oval or slightly elongate-oval, its upper apical process scarcely, or only a very little, longer than lower one, the two together forming a more bifid process; palps proportionally much shorter, less projecting; hairs on head, body, and legs distinctly shorter, less dense; scutellum more rounded apically; basal joint of hind tarsi distinctly much more than half length of hind tibiae ♂ *ovalicornis* sp. nov.
- 15 (a) Frons and genae with dark blackish brown or black hairs; palps and legs slightly paler, more pale yellowish brown to sienna brownish; proboscis longer, about 2–2.5 mm; veins in wings pallid or yellowish and those between anal and axillary cells and anal and fourth posterior cells markedly straight; apical stalk of anal cell on the whole longer, subequal to, or as long as, apical cross vein of discoidal cell; antennal joint 3 shorter, broader, more spindle-shaped, its upper apical process on the whole stouter, blunter, scarcely or not much curved and the lower apical part more prominent ♂ *nigribarba* Hesse
- (b) Frons with dark, or some dark, hairs, but genae entirely white-haired; palps and

legs much darker, darker brownish or black; proboscis shorter, only about 1.5 mm long; veins in wings darker and those between anal and axillary and anal and fourth posterior cells not entirely or so markedly straight; stalk of anal cell shorter than apical cross vein of discoidal cell; antennal joint 3 more elongate, slightly more than twice as long as joints 1 and 2 combined, not so obviously spindle-shaped, its upper apical process slightly longer, more slender, more acute apically, and more curved downwards to the scarcely prominent lower apical angle ♂ *simmondsii* Hesse

♀♀

- 1 (a) Proboscis without any hairs or dense hairs on labral part; apical part of head beyond anterior level of eyes to antennal insertions less conically produced, prominent, narrowed, or pointed apically, appearing less tilted upwards, the buccal cavity not straightly and steeply sloping backwards and, if rarely so, proboscis without hairs above; body not predominantly, or almost entirely, yellowish above and below and, if greater part of body is not black, the thorax above and basal halves of tergites at least black or more extensively black 2
- (b) Proboscis with distinct, conspicuous, fairly dense and longish, yellowish or golden-gleaming hairs on at least basal half of labral part above; apical part of head, beyond eyes to antennal insertions, distinctly more markedly conically prominent, produced, narrowed, and more pointed apically, appearing more tilted upwards, the buccal cavity distinctly more straightly, steeply sloping obliquely backwards; body predominantly, almost entirely yellow or yellowish above and below, even thorax above with only three reddish brown or brownish fasciae, and only extreme bases of tergites discally above and an infusion on hypopleural part dark
♀ *pilirostris* Hesse
- 2 (a) Antennal joint 3 more spindle-shaped, usually more equally broadened above and below at broadest part, appearing less distinctly humped, ending apically in an upper and lower spine-like process either more or less equally prominent and together forming a more or less bifid process, or with a tendency for lower one to be stronger; head in front less tumidly prominent, the frons distinctly less broadly transversely convex and upper parts of genae not so continuously tumid or convex with frontal convexity; wings, even if with some degree of subopacity, not distinctly tinted subopaquely milky whitish; vestiture on body and legs distinctly less dense, much sparser, or shorter, often almost wanting; body usually with extensive yellow, rarely mainly black 3
- (b) Antennal joint 3 tending to be more distinctly humped above, sometimes conspicuously so, ending in a distinctly longer or stronger, sometimes curved down, upper process and a more reduced, sometimes scarcely detectable, lower prominence, rarely with both more or less equally developed and, if so, other characters listed here do not differ; head in front slightly or distinctly more tumidly prominent or protuberant, the frons distinctly more convex, more transversely so, relatively broader, and upper parts of genae also relatively more convex or tumid and continuously so with frons and, if not apparent, other characters conform; wings rarely not distinctly, often conspicuously, tinted subopaquely milky whitish; vestiture on body and legs usually distinctly more conspicuous, denser, and usually longer; body mainly black or dark, without any, or with very little, yellow present . . . 13
- 3 (a) Body with distinctly much or more yellow, the head, at least sides of thorax above, scutellum, hind margins of tergites, pleurae, venter, and sometimes legs conspicuously yellow or orange yellow to a variable, greater or lesser, extent; genae, head below, scutellum, and rest of body above not, or distinctly less, shiny, not tending to be brilliant; wings usually more hyaline and, if distinctly tinted greyish or dusky, body with much yellow 4
- (b) Body entirely black, without any yellow markings, the legs entirely very dark blackish brown or black, and even knees not markedly paler; genae, head below, scutellum, and to a certain extent integument of rest of body above distinctly more brilliantly shining and smooth; wings distinctly, though faintly, tinged slightly subopaquely greyish yellowish or cinereous yellowish, even with a faint brownish tint in certain lights ♀ *pubescens* Bezzi

- 4 (a) Legs, including coxae, entirely or predominantly pale yellowish or at least mainly, or more extensively yellowish; almost entire prosternal part, pleural parts below wings, and hind margins of sternites usually entirely, predominantly, or at least more extensively yellowish and, if not, legs are yellowish; upper apical process of antennal joint 3 either nearer apex or almost as long as or as strongly developed as lower one, the two together forming a more symmetrical bifid process and, if not, legs at least mainly yellowish 5
- (b) Legs, including coxae, entirely very dark, blackish brown, or black, or with much black, only the knees sometimes pallid or yellowish; prosternal part, pleural parts below wings mainly dark or black, and hind margins of sternites, if not black, usually more obscurely, or only narrowly, yellowish; upper apical process of antennal joint 3 either farther back from apex or smaller, shorter, and less developed than lower one, the two together usually forming a more asymmetrical bifid process . . . 10
- 5 (a) Body relatively broader and thorax distinctly less humped; head and frons relatively much broader; scutellum markedly or more obviously transverse, distinctly very much broader than long, quite, or more often, a little more than twice as broad as long; basal joint of hind tarsi only about, or only a little more than, half length of hind tibiae; front femora above and outer hind faces of tibiae more distinctly darkened 6
- (b) Body relatively narrower, the thorax distinctly more convex above, more humped; head and frons narrower; scutellum less transverse, relatively or distinctly much narrower, more conically narrowed posteriorly and, though broader than long, usually considerably less than twice as broad as long; basal joint of hind tarsi distinctly very much more than half length of hind tibiae; front femora and outer faces of tibiae not, or scarcely, darker and, if much darkened, other characters do not differ 8
- 6 (a) Broadish hind border, or almost hinder half, and sometimes narrow base of scutellum, black; yellow hind margins of tergites distinctly broader, occupying almost, or about, the apical halves of tergites on sides; yellow on sides of thorax above relatively narrower; lateral extension of black frontal fascia on frons anteriorly more constant and broader, usually reaching eye; hairs on tergites distinctly less dense, relatively shorter, and those discally more whitish; fine hairs on frons also less dense, more whitish; tarsi tending to be paler, or more yellowish, basally or in basal part
♀ *laeta* Bezzi
- (b) Entire scutellum discally yellow; yellow hind margins of tergites distinctly narrower, occupying less than apical halves of tergites on sides; yellow on sides of thorax above usually broader; black medial frontal fascia either not extending laterally on frons in front, or the extension is narrower or spot-like; hairs on tergites distinctly denser, relatively longer, and distinctly sericeous yellowish to pale golden discally; fine hairs on frons denser, more golden; tarsi tending to be entirely dark or black . . . 7
- 7 (a) Antennal joint 3 ending apically in two almost equally strong upper and lower processes, the upper one scarcely much smaller than lower one and tending to be nearer apex, the two together forming a distinctly more symmetrical bifid process; upper surface of front femora and sometimes a subapical infusion on inner or upper apical part of the others and outer faces of all the tibiae more conspicuously or intensely darkened; knobs of halteres with a dark spot or darkened on outer margin or sides above ♀ *flaviscuta* sp. nov. (and forms of it)
- (b) Antennal joint 3 ending apically in two unequally developed processes of which the upper one is much weaker and thinner than the much stouter lower one and also farther from the apex, the two together forming a distinctly more asymmetrical bifid process; upper surface of front femora and outer surfaces of all the tibiae not, or only feebly and less conspicuously, darkened; knobs of halteres not distinctly darkened in part or with a spot above ♀ *hesperia* sp. nov.
- 8 (a) Wings vitreous hyaline, without any, or scarcely any, detectable subopacity; black on head more reduced, that on occiput less extensive, that on head above more or less narrowly confined to ocellar tubercle, or as a narrow line towards middle, and as a spot anteriorly on each side of antennae, without a broadish central band on head below, and buccal rims and buccal cavity also pale; yellow on pleural parts

distinctly much more extensive, greater part of pleurae above coxae being entirely or predominantly yellow; yellow on sides of thorax broader, more extensive, and with a tendency for two yellowish submedial lines above as well, and base of thorax above yellowish or orange yellowish to a variable extent; scutellum entirely yellowish; transverse black basal bands across tergites almost confined to middle above; antennae with joint 1 more transverse, about as long as, or subequal to, joint 2, usually yellowish or at least yellowish above, with joint 3 more spindle-shaped or humped, without any distinct hairs above ♀

- (b) Wings distinctly dusky, tinted subopaquely cinereous yellowish to brownish; black on head distinctly more developed, almost the entire occiput and a broad central fascia from it across ocellar tubercle to antennae black, without a spot on each side of antennae, but with the buccal rims and buccal cavity dark, and a central broad fascia on head below also black; yellow on pleural parts distinctly more reduced, present only as a propleural spot, a central band across upper part of sternopleuron, spots behind pteropleuron and on metapleural part; yellow on sides of thorax much narrower, the entire discal part black, and base of thorax above black; scutellum yellowish only on disc, its broad declivous sides black; transverse black basal bands across tergites extending down sides as well; antennae with joint 1 entirely black, slightly more elongate, tending to be slightly longer than 2, with joint 3 scarcely or not broader across middle, not distinctly humped, and with distinct and conspicuous hairs above ♀ *tinctipennis* sp. nov.
- 9 (a) Hairs on body, and especially on abdomen, distinctly much sparser, less conspicuous, shorter, and sometimes almost absent. . ♀ *pulla* Bezzi var. *xerophila* Hesse
- (b) Hairs on body, and especially on abdomen, distinctly much denser, longer, more conspicuous ♀ *pulla* Bezzi var. *fallax* Hesse
- 10 (a) Yellow or orange yellow transverse bands across hind margins of tergites distinctly very much broader, occupying nearly, or even about, apical half of tergites; yellow on sides of thorax relatively broader, the fascia across sternopleuron occupying almost entire upper part of it, and scutellum with less black on declivous sides; wings relatively broader and longer, without, or with scarcely detectable or feebler, subopacity; proboscis longer, not shorter than 2 mm 11
- (b) Yellow transverse bands across hind margins of tergites and sternites distinctly very much narrower, those of tergites occupying considerably less than apical halves; yellow on sides of thorax relatively narrower, the fascia across sternopleuron occupying only hinder upper half, and scutellum with more extensive black on declivous sides; wings relatively shorter and narrower, with a more conspicuous subopaquely milky whitish tint; proboscis shorter, only about 1,8–2 mm
♀ *cognata* Hesse
- 11 (a) Proboscis distinctly stouter, longer, about 2,8–3,5 mm; occiput with some yellow behind eye-margins, either on vertex or right around eyes; anterior spiracle with more yellow around it; yellow hind margins of tergites broader, not much less than apical half of tergites; legs on the whole darker, with broader yellowish knees; wings with a distinct, though feeble, subopacity 12
- (b) Proboscis more slender, shorter, only about 2 mm long; entire occiput behind eyes in at least upper half black; anterior spiracle without any, or with scarcely any, yellow; yellow hind margins of tergites narrower; legs with more yellowish brown or yellowish on femora, especially on inner upper surfaces on at least basal halves, and front coxae pale in front, and knees not, or less broadly, yellowish; wings more vitreous hyaline, without any detectable subopacity ♀ *varipes* sp. nov.
- 12 (a) Thorax entirely black above; yellow on sides of thorax in front slightly narrower, and scutellum with more black on declivous sides; yellow hind margins of tergites narrower, occupying only about apical halves of tergites; frons with a consistent broad central black band extending to antennae; wings clearer hyaline
typical ♀ *crocogramma* Hesse
- (b) Base of thorax yellowish or yellowish-spotted to a variable extent; yellow on sides of thorax relatively broader, and scutellum without, or with much less, dark on declivous sides; yellow hind margins of tergites broader, occupying more than apical halves of tergites; black fascia on frons much reduced, either wanting or

- thinning out anteriorly; wings with a slight, but distinctly more evident, subopacity ♀ var. of *crocogramma* Hesse
- 13 (a) Antennae with joint 1 distinctly much longer, at least $1\frac{1}{2}$ times to nearly, or about, twice length of 2, with joint 3 usually distinctly more humped, ending in a conspicuous, slightly curved, upper process which dwarfs the scarcely detectable lower one; head in front distinctly more conically prominent or produced; head below, propleural callosity above front coxae, and a longitudinal fascia along middle of pleurae, ivory yellowish or yellow; hairs on head, body, and legs distinctly longer, markedly denser, and more woolly or shaggy 14
- (b) Antennae with joint 1 much shorter, subequal to, as long as, or scarcely longer than, 2, with joint 3 usually not so conspicuously humped, sometimes more spindle-shaped, or subparallel-sided, or even oval, ending apically in a relatively less developed upper process which usually forms a more evident bifid process with the lower one which itself is only a little shorter; head in front distinctly less prominent, not conically produced; head below, or at least greater part of it below, and pleurae, either entirely black or not with yellowish on all the above-mentioned sites; hairs on head, body, and legs distinctly shorter, relatively less dense, less woolly or shaggy 16
- 14 (a) Head in front broader, less conically prominent; antennal joint 3 more conspicuously humped, with conspicuous hairs above, ending apically in a longer, stouter, finger-like process; frons entirely black; head below without a central dark fascia; scutellum more broadly rounded; hairs and scaling on body and legs distinctly much denser and longer, those above brassy or golden yellow; slightly larger and more bulky forms, usually more than 4,5 mm long 15
- (b) Head (cf. Fig. 1D) in front narrower, distinctly more conically prominent or produced; antennal joint 3 less conspicuously humped, without any conspicuous hairs above, ending in a shorter, less stout, upper process; frons with a yellow stripe on each side along eye-margins; head below with a central dark fascia; scutellum distinctly more conically pointed or narrowed apically; hairs and scaling on body and legs less dense, shorter, and those above distinctly silvery white; slightly less bulky forms, only about 4,4 mm long, with a wing-length of about 4,2 mm
♀ *conocephala* sp. nov.
- 15 (a) Upper part of genae smooth, without hairs, or with a few pale ones; wings distinctly less conspicuously milky whitish, with darker, darker brownish, or blackish brown veins; knobs of halteres usually with a variable dark spot above; knees more distinctly yellowish ♀ *lanigera* Bezzi
- (b) Upper part of genae with a dense tuft of black hairs; wings distinctly and more conspicuously milky whitish, the veins distinctly paler, more yellowish brown or yellowish; knobs of halteres entirely ivory whitish or yellowish above; knees not, or scarcely perceptibly, yellowish ♀ *lanigera* var. *melampogon* n.
- 16 (a) Genae and head below entirely black; pleural parts entirely black; antennal joint 3 more spindle-shaped or oval; wings with the veins very pale, pallid or yellowish, the middle cross vein usually much beyond middle of discoidal cell; apical stalk of anal cell longer, at least as long as, or even longer than, apical cross vein of discoidal cell; knobs of halteres entirely very pale or pallid above; basal joint of hind tarsi usually about, or scarcely more than, half length of hind tibiae 17
- (b) More than lower half of genae and continuous as a narrow streak round margin of eyes to about halfway up behind eyes pallid; small, middle, boss-like prominence in middle of pleurae between sterno- and hypopleurae and pteropleuron, and sometimes even to a certain extent on adjacent parts of sterno- and metapleuron, also pallid; antennal joint 3 tending to be more subparallel-sided, less broadened at middle; wings with the veins distinctly darker, more brownish to blackish brown, the middle cross vein only a little beyond middle of discoidal cell; apical stalk of anal cell shorter, markedly short, much shorter than apical cross vein of discoidal cell; knobs of halteres slightly darkened above or with a variable dark infusion; basal joint of hind tarsi distinctly much more than half length of hind tibiae
♀ *namaquensis* sp. nov.

- 17 (a) Base of second submarginal cell more normal or at least not markedly acute; antennal joint 3 relatively longer, more spindle-shaped, its upper apical process distinctly stouter and longer than lower one, the apex less bifid in appearance; greater part of palps luteous or yellowish; legs on the whole paler, with more yellowish or yellowish brown, the apical parts of femora and the tibiae, and greater part of tarsi pale yellowish or luteous; hairs relatively less dense, but slightly longer
♀ *nigribarba* Hesse
- (b) Base of second submarginal cell distinctly much more markedly acute; antennal joint 3 (cf. Fig. 1E) relatively shorter, more oval, its upper apical process not much, or scarcely, longer than lower one, the apex thus more symmetrically bifid; palps dark; legs, including tibiae, distinctly much darker, mainly blackish brown or black, only the knee-articulations being reddish brownish, and bases of tarsi tending to be dark sienna or reddish brownish; hairs relatively shorter, but distinctly much denser ♀ *ovalicornis* sp. nov.

Subfamily Usiinae Becker

This subfamily, originally based on the typical Palaearctic genus *Usia* Latreille, was supposed by me (Hesse 1938: 712) not to be represented in southern Africa after the transference of the genera *Corsomyza* Wied. and *Hyperusia* Bezzi, which Bezzi (1924: 103-109) placed in the Usiinae, to the Bombyliinae (Hesse 1938: 712-713).

Recently Hull (1973:212-211) however emended and redefined this subfamily, restricting it to four genera of which two, *Usia* Latreille and *Dagestania* Paramonov, are Palaearctic and Oriental in their distribution and two, *Apolysis* Loew and *Oligodranes* Loew, occur not only in the Palaearctic and Nearctic Regions but also in the Ethiopian Region including the South African subregion.

As a result of Hull's taxonomic assignment of genera in this subfamily the latter two genera which I placed in the subfamily Phthiriinae in my revision (Hesse 1938: 822) are now to be considered as important South African representatives of the emended subfamily Usiinae.

Genus *Apolysis* Loew

Apolysis: Hesse, 1938: 848. Hull, 1973: 217.

The discovery of still other South African species of this genus does not appear to necessitate much change in the diagnostic characters recorded by Loew (1860) and Engel (1933: 127) and supplemented by me in 1938, and more fully detailed by Hull in 1973. Worthy of record however are that in the case of the South African forms the wings appear to be more frequently distinctly tinted milky whitish, that the abdomen of both sexes in some species is often entirely or predominantly pallid or yellowish, that the legs of certain species are relatively short and stoutish, and that the hind femora of still others are slightly curved.

Descriptions of new species and comments on already described ones are as follows:

Apolysis monticola sp. nov.

Fig. 2D

In the absence of the ♂, these ♀♀ are here described as a new species even though they appear to be very near the ♂ *xanthogaster* Hesse (1938: 853, fig. 259). They are characterized as follows:

Body and legs mainly black; integument dull, with very faint greyish white bloom on head, thorax above, and scutellum; hind margins of tergites narrowly pallid or yellowish, those of sternites more broadly yellowish, sometimes very much so or even with greater part of venter, apart from the broad pallid hind margins, reddish yellow, and with at least the sides (articulating part between tergites and sternites) conspicuously yellowish; legs sometimes, or at least the tibiae, more castaneous brown.

Vestiture with the hairs, even on head and thorax, very sparse, entirely pale or whitish, those on abdomen short and a little longer posteriorly; those on legs short, not conspicuous.

Head with antennal joint 1 distinctly longer than 2, about $1\frac{1}{2}$ –2 times as long; joint 3 distinctly slightly produced and rounded apically beyond the spine which is dorsal and subapical in position; proboscis stoutish, about 0.6–1 mm long; palps longish, distinctly projecting, at least as long as antennal joints 2 and 3 combined, and usually about as long as antennae.

Wings (cf. Fig. 2D) greyish hyaline, with a very faint greyish white sub-opacity in certain lights; veins brown to dark brown; first basal cell a little longer than second, and part of third vein between it and apical cell sub-equal to, as long as, or even slightly longer than, cell itself; knobs of halteres entirely whitish.

From 6 ♀♀, including the holotype, in the South African Museum.

Length of body: about 2.2–3.12 mm

Length of wing: about 2.3–3.4 mm

Distribution

Natal: Cathedral Peak in Natal Drakensberg, alt. 1 950 m (B. Stuckenberg, March 1955).

The darker legs, the relatively longer wings, slightly longer first basal cell, relatively longer second submarginal cell, much darker veins, and shorter proboscis distinguish this species from the ♂ *xanthogaster* which also comes from the Drakensberg on the Orange Free State side.

Apolysis thamnophila sp. nov.

A species very near the preceding species and also *cingulata* Hesse (1938: 853).

From *monticola* it differs in having the integument of body above distinctly more shining, distinctly broader yellowish hind margins to the tergites, dark

hairs on thorax above posteriorly and on scutellum, shorter and sparser hairs on abdomen, a first basal cell which is as long as second, and very much shorter than distance between first basal cell and base of second submarginal cell.

From ♀ *cingulata* Hesse it differs in being relatively smaller, 2,2 mm as against 3,5 mm and with a wing-length of only about 2,4 mm as against 4 mm, in having a darker buccal rim, narrower ivory yellowish hind margins to tergites, entirely dark legs, including knees, more whitish hairs on occiput, darker hairs on thorax posteriorly and on scutellum, entirely yellowish white halteral knobs, shorter proboscis, only about 1 mm long as against 2 mm in *cingulata*.

From a single ♀ specimen in the South African Museum.

Distribution

Little Karoo: Rust en Vrede near Oudtshoorn (Museum expedition, October 1951).

Apolysis stuckenbergi sp. nov.

Fig. 2A

This species which belongs to the *humilis* section is named after Dr B. Stuckenberg of the Natal Museum who is a great South African dipterist and who has collected many interesting species of *Bombyliidae* in Natal. The species is characterized as follows:

Body black; hind margins of tergites and sternites narrowly and obscurely pallid or whitish in ♀; legs entirely very dark blackish brown to black; integument of body dull, with dull greyish white bloom, absent on thorax above in ♂, but in ♀ separated by two submedial dark lines and a broken lateral one.

Vestiture with the hairs on body and legs sparse, longer in ♂ than in ♀, entirely whitish.

Head with the eyes in ♂ in contact in front of ocellar tubercle, separated in ♀, on vertex nearly, or quite, 3 times width of tubercle; transverse frontal depression in ♀ at about middle and the middle longitudinal depression from the ocellar tubercle ending in it; antennal joint 1 distinctly longer than 2, at least $1\frac{1}{2}$ times as long as 2; joint 3 (cf. Fig. 2A) elongate, with a rather distinct prominence in front of apical spine, the latter dorsal and subapical in position, with the apex of joint beyond spine slightly produced and rounded; proboscis (cf. Fig. 2A) about 1–1,2 mm long, slightly stouter in ♀; palps long, projecting conspicuously, nearly or quite as long as antennae.

Wings greyish hyaline; veins dark blackish brown; first basal cell a little, but distinctly, longer than second, shorter than distance between it and second submarginal cell; second posterior cell widely divergent apically; knobs of halteres darkened or black above in ♂, usually entirely whitish in ♀ or sometimes with a small darkish spot above.

Legs slender; first basal joint of hind tarsi a little less than half length of hind tibiae.

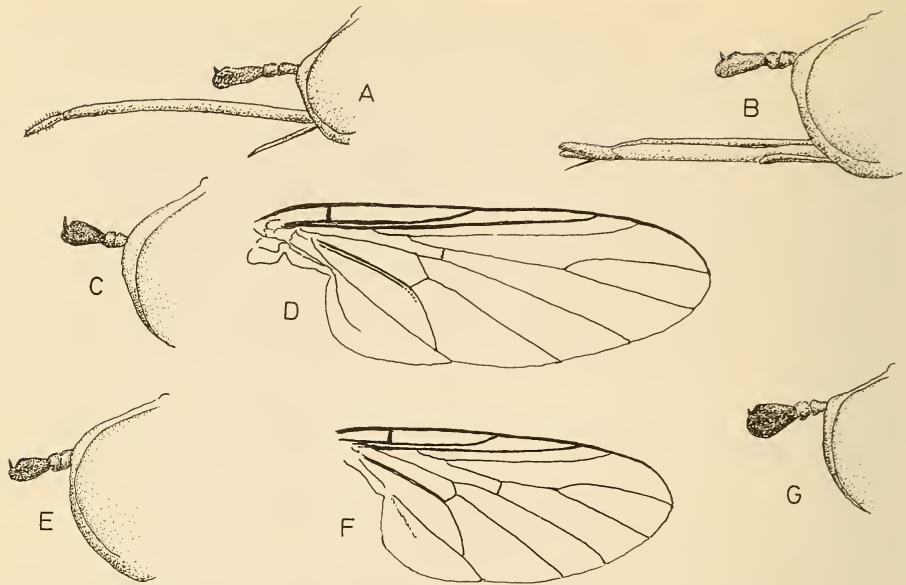


Fig. 2. Left side views of heads and antennae, and right wings of some new species of *Apolysis*.
(All to the same scale.)

A. ♀ *stuckenbergi*; B. ♀ *capicola*; C. ♀ *brachycera*; D. ♀ *monticola*; E. ♀ *seminitens*;
F. ♀ *semiflava*; G. ♂ *hirtella*.

From 5 ♂♂ and 5 ♀♀ (♂ holotype in the Natal Museum, ♀ allotype in the South African Museum).

Length of body: about 1,8–2,2 mm

Length of wing: about 2,12–2,6 mm

Distribution

Natal: Karkloof (B. Stuckenberg, 1 April 1956).

From *humilis* Loew it differs mainly in being smaller, with entirely whitish hair on occiput, thorax above, and scutellum, and slightly less cinereous-tinted wings.

Apolysis oreophila sp. nov.

Some other ♀♀ from the Drakensberg in Natal resemble ♀♀ of the preceding species *stuckenbergi* so closely that they may almost be considered as only representing a variety of the latter. In the absence of the ♂ and the slight differences present in these ♀♀ they are here considered as a distinct species.

They differ from *stuckenbergi* in being distinctly larger, about 2,4–3 mm, with a greater wing-length of about 3–3,2 mm (as against 2,12–2,6 mm in the latter); in having the subopacity of the wings in certain lights more distinctly, though faintly, whitish and not cinereous, and with the veins more yellowish

brown than blackish brown; apical stalk of anal cell apparently shorter, subequal to, or even shorter (not a little longer) than apical cross vein of second basal cell; hairs on body and legs distinctly longer, relatively more dense, and the fine hairs on hind tibiae longer, more conspicuous; and in having slightly broader and more constantly pallid hind margins to the abdominal segments, especially the sternites.

From 6 ♀♀ (holotype in the Natal Museum and paratypes in the Natal and South African Museums).

Distribution

Natal: Cathedral Peak area in the Natal Drakensberg, alt. 1 950 m (B. Stuckenberg, 23 March 1955).

Apolysis capicola sp. nov.

Fig. 2B

This southern Cape species is referable to the *xanthogaster* and *monticola* section, but may also be compared with the *stuckenbergi* and *oreophila* section. It agrees and differs from these species mentioned in the following respects:

Body, including legs, mainly black; integument entirely dull, thus differing from *cingulata* and *thamnophila*; hind margins of tergites scarcely, or only very narrowly, pallid in ♂, those of sternites in ♂ narrowly pallid, the tergites in ♀ sometimes as in ♂, but sometimes, especially those posteriorly, narrowly and distinctly pallid or yellowish, broader so than in ♂, and hind margins of sternites in some ♀♀ relatively broadly yellowish, more like those of some ♀♀ of *monticola* and thus distinctly broader so than in *stuckenbergi* and *oreophila*,

Vestiture on body distinctly not very dense, entirely sericeous whitish, even on thorax above.

Head with the eyes in ♂ in contact above for about 2.4–2.8 times length of ocellar tubercle; interocular space on vertex in ♀, at narrowest part, distinctly slightly broader than length of antennal joint 3 (sub-equal to length of joint 3 in ♀ *monticola*); antennae (cf. Fig. 2B) with joint 1 short, subequal in length to 2 or scarcely longer than 2 (distinctly or much longer than 2 in *monticola*, *stuckenbergi* and *oreophila*); joint 3 with the dorsal prominence in front of subapical excavation not, or distinctly less angularly, prominent than in *stuckenbergi* and *oreophila*; palps relatively stoutish, subequal in length to, or scarcely longer than, antennae (more slender and longer in *monticola* and the latter two species); proboscis (cf. Fig. 2B) stouter and appearing shorter than in *stuckenbergi* and *oreophila*.

Wings differing from those of all the species mentioned in being distinctly, though faintly, tinted subopaquely milky whitish; veins yellowish brown to brown; first basal cell scarcely longer than second; second posterior cell slightly divergent apically; knobs of halteres darkened or black above in ♂, entirely whitish in ♀, but in some ♀♀ also slightly darkened above.

Legs with the basal joint of hind tarsi only a very little less than half length of hind tibia.

From 6 ♂♂ and 25 ♀♀, including the ♂ holotype and ♀ allotype, in the South African Museum.

Length of body: about 1,84–2,84 mm

Length of wing: about 1,8–3,04 mm

Distribution

South-western Cape: Pearly Beach in Bredasdorp District (South African Museum expedition, December 1958) (holo- and allotypes); Wit River Valley, Bainskloof near Wellington (November 1937); Leipoldtville (South African Museum expedition, November 1956).

Apolysis fumalis Hesse

Apolysis fumalis Hesse, 1938: 855.

Since my description of the ♀ of this species in 1938 the ♂ has also been taken and the following supplementary notes on the species have to be added:

Body of ♂ entirely black; integument of thorax above in ♂ without the brownish grey bloom of ♀; legs dark chestnut brown.

Vestiture with the hairs on occiput in both sexes, those on genae and head below in ♂, and those on rest of body in ♂, including those on coxae and greater part of legs dark blackish brown to black, those on thorax above, scutellum and abdomen above in ♀ sometimes also more brownish or brownish yellow than yellow.

Head in ♂ with the eyes, in front of ocellar tubercle, in contact for a distance nearly 3 times length of the tubercle; antennal joint 1 in both sexes quite twice as long as joint 2; proboscis about 1,4–1,8 (or 2) mm long; palps long, conspicuous, and in ♂ and some ♀♀, as long as antennae.

Wings distinctly dusky or smoky brownish, darker in ♂ than in ♀; first basal cell longer than second, longer than part of third vein between it and second submarginal cell; second posterior cell widely divergent apically; knobs of halteres in ♂ entirely dark castaneous brownish.

Legs with the basal joint of hind tarsi much more than half length of hind tibia.

The original ♀ holotype is in the British Museum (Natural History), the ♂ allotype is in the South African Museum.

Length of body: about 3–3,5 mm

Length of wing: about 3,8–4,5 mm

Distribution

Natal: Karkloof (B. Stuckenberg, 1 April 1956) (♂ allotype and the other ♀♀).

Apolysis minuscula sp. nov.

A minute aberrant species which is characterized as follows:

Body mainly black, the integument smooth, polished and shining; hind margins of tergites (broadened on extreme sides), the slightly broader hind margins of sternites, and the broad articulating part on each side below between tergites and sternites in ♀ ivory yellow or yellow: hind margins of tergites in ♂ only very narrowly or obscurely yellowish, evident only on sides posteriorly; antennae, proboscis and legs yellowish brown to dark castaneous brownish, though antennal joints 1 and 2 sometimes paler.

Vestiture with the hairs on body and legs, and even head, fine, very short and sparse, inconspicuous, almost imperceptible or wanting, even in ♂, and, where detectable, apparently dark.

Head with the eyes in ♂ broadly separated above, a little more than half width of the interocular space in ♀; frons medially foveately depressed in basal half in front of anterior ocellus, somewhat tumidly convex and rounded anteriorly, more evident in ♀, the head thus more rounded anteriorly above; antennal joint 1 a little longer than 2; joint 3 more elongate ovate in ♂, usually more ovate in ♀, at least half as broad as long; proboscis, relative to body, markedly long, about 0,68–1,5 mm; palps shorter than antennae, not very conspicuously visible and not projecting much.

Wings vitreous hyaline, with a scarcely detectable milky whitish tint or subopacity in certain lights; veins or parts of veins in anterior half of wings yellowish, their distal parts, or veins in posterior half, paler, more whitish; first basal cell as long as second, much shorter than part of third vein between it and second submarginal cell; second posterior cell widely divergent apically; apical stalk of anal cell markedly long, relatively longer than in other known South African species of this genus, at least twice as long as base of third posterior cell.

Legs with the basal joint of hind tarsi much shorter than half length of hind tibia, sometimes even only a third of its length.

1 ♂ and 6 ♀♀, including the ♀ holotype and ♂ allotype, in the South African Museum.

Length of body: about 1,2–1,7 mm

Length of wing: about 1,6–1,9 mm

Distribution

Bushmanland: Between Springbok and Pella (Museum staff, October 1939) (♀ holotype and 3 ♀ paratypes); Aggenys (Museum staff, October 1939) (♂ allotype and a ♀ paratype). North-western Cape: Kenhardt area (Museum staff, October 1939) (1 ♀ paratype).

Frequents flowers of *Mahernia grandiflora* and *M.nana*, and is easily recognized by its small size, cyrtosiine appearance, smooth and shining integument, and almost entire absence of vestiture.

Apolysis lindneri Hesse

Apolysis lindneri Hesse, 1962: 1, fig.

This is a very small species which Dr E. Lindner of the 'Staatliches Museum für Naturkunde in Stuttgart' caught on the yellow flowers of the composite *Chrysanthemoides monilifera* when he visited Cape Town in 1958 and which I described in 1962.

It differs from all the other known South African species of *Apolysis* except the preceding *minuscula*, in its small size. It is characterized as follows:

Body, including antennae and proboscis, entirely dark, dark blackish brown; eyes reddish brown; hind margins of sternites slightly narrowly pallid or pale.

Vestiture in form of fine, not very dense, greyish bloom on head, thorax, abdomen, and pleurae, and shortish, somewhat sparse hairs, slightly longer on sides of thorax anteriorly, on scutellum posteriorly, and on abdomen; these hairs gleaming pale on sides of head behind eyes, darker on occiput, pale on sides of thorax and on scutellum, darker on disc of thorax, more pale on abdomen, pale, shortish and sparse on legs, slightly longer and denser along outer hinder surfaces of hind tibiae.

Wings rather narrowish, slightly longer than body, greyish hyaline, but distinctly faintly milky whitish in certain lights; veins brownish, even fine hind margin and microtrichial fringe dark; first basal cell very slightly longer than second, distinctly shorter than part of vein between it and apical cell; latter cell slightly shorter than this same part; second posterior cell divergent apically; apical stalk of anal cell rather long, nearly twice length of base of third posterior cell; knobs of halteres whitish.

Head with the frons parallel-sided, slightly broader than width of eye (front view), slightly transversely depressed across middle, the apical part only slightly convex; antennal joint 1 subequal to 2, the two together slightly shorter than joint 3; the latter about 2,5 times as long as broad; proboscis rather stoutish, only about 0,68 mm long; palps short, not perceptibly projecting.

Legs rather slender and long, the tarsi elongate, with the basal segment of hind ones quite, or nearly, half length of hind tibiae.

From the single ♀ specimen in the Museum in Stuttgart.

Length of body: about 1,2 mm (excluding proboscis)

Length of wing: about 1,6 mm

Distribution

Western Cape Province: Cape Town (E. Lindner, 31 October 1958).

From *minuscula*, the other minute species from north-western Cape, it may at once be distinguished by the duller head and body, covered with fine greyish bloom, the longer and denser hairs on thorax and abdomen and legs, absence of distinct and conspicuous yellowish hind margins to tergites and

sternites, a first basal cell in wings which is slightly longer than the second, slightly longer, more slender legs, with relatively longer basal joint tarsi, longer basal joint of hind tarsi, and slightly shorter and stouter proboscis.

Apolysis thornei Hesse

Apolysis thornei Hesse, 1938: 857, fig. 261.

Of this species the South African Museum has since obtained a very long series of both sexes from flowers of *Mahernia brandiflora* and *M. nana* in Bushmanland, north-western Cape and the Koup Karoo.

From this series it is quite evident that the species is variable and that certain statements made by me in 1938 have to be modified somewhat.

In the first place specimens (more typical form) from Bushmanland, north-western Cape, and Nieuveland Karoo have the hind margins of the tergites in the ♀♀ only narrowly yellowish, more broadly yellowish only at apex of abdomen; the wings slightly more apparently milky whitish; costal cell relatively broad at middle; and knobs of halteres in ♂♂ darkened above.

Specimens from the Koup Karoo have the hind margins of the tergites distinctly or very much broader yellowish.

Some ♀♀ from Bushmanland are entirely black, without any yellowish or pallid hind margins, and with the integument of the entire body above shining, and with the wings distinctly less milky whitish, more vitreous hyaline.

Some ♂♂ from Namaqualand have not only the wings less milky whitish, but the knobs of halteres entirely pallid.

Some ♂♂ from the Moordenaars Karoo near Laingsburg have not only pallid halteral knobs, but much yellowish on abdomen and even more yellowish legs.

Apolysis semiflava sp. nov.

Fig. 2F

This species which belongs to the *thornei* section and which, like *thornei* and some other species, frequents the flowers of a species of *Mahernia*, is easily recognized by the following characters:

Body with the head, thorax (except slightly yellowish humeral angle and postalar margin in ♀), and scutellum black; abdomen in ♀ entirely very pale yellowish, the hind margins of segments sometimes even more whitish; abdomen in ♂ with the hind margins of tergites narrowly pallid or yellowish to a variable extent, broader on sides and those of sternites even broader so to a variable extent, the entire venter sometimes tending to be yellowish and large scoop-like last sternite (or tergite) entirely yellowish; integument of thorax and scutellum above in ♂ more or less shining, duller in ♀ and covered with greyish white bloom; frons and upper parts of genae in ♂ with silvery tomentum; abdomen in ♂ also markedly and densely covered with greyish white bloom; legs with the femora yellowish brown, castaneous to dark brown, or almost black, the tibiae

and tarsi, and usually the knees, in ♂ paler or even more yellowish to a variable extent, in ♀ the tibiae and at least basal halves of tarsi, and also apices of femora more consistently yellow.

Vestiture with the hairs on body and legs whitish, not very dense, but distinctly much denser and longer in ♂, those on abdomen in ♀ long only posteriorly.

Head with the eyes in ♂ in actual contact above for some distance, about $2\frac{1}{3}$ – $2\frac{2}{3}$ times as long as ocellar tubercle; frons in ♀ with the transverse depression relatively shallow, less evident than medial longitudinal one in front of tubercle; antennal joint 1 very short, as long as, or scarcely, or only a very little longer than 2; joint 3 elongate-oval, about twice as long as broad, broadest slightly beyond middle, its apical spine nearly terminal, the apex of joint scarcely produced beyond spine; palps short, inconspicuous, confined to buccal cavity; proboscis about 1,12–1,48 mm long, usually a little stouter in ♀.

Wings (cf. Fig. 2F) rather conspicuously tinted subopaquely milky whitish; veins whitish, only those in costal part slightly more yellowish or pallid; first basal cell distinctly much longer than second and much longer than part of third vein between it and second submarginal cell; second posterior cell subparallel-sided, scarcely, or not, diverging apically; apical stalk of anal cell relatively long; knobs of halteres entirely whitish in both sexes.

Legs comparatively short, the basal joint of hind tarsi distinctly much less than half length of hind tibia; claws feeble, short, mainly pale.

From 8 ♂♂ and 41 ♀♀, including the ♀ holotype and ♂ allotype, in the South African Museum.

Length of body: about 2,08–3 mm

Length of wing: about 2,4–3 mm

Distribution

Little Karoo: Oudtshoorn District (Museum expedition, October 1952) (♀ holotype and ♂ allotype); Uniondale District (Museum expedition, October 1952). Karoo: between Vondeling and Willowmore (Museum expedition, October 1952). Koup Karoo: Lammerfontein in the Moordenaars Karoo in the Laingsburg Division (Museum expedition, October 1952).

Its entirely yellow abdomen in ♀, broader yellowish hind margins of abdominal segments in ♂, the yellowish tibiae, milky whitish wings with whitish veins, and shorter proboscis distinguish it at once from *thornei* which species it appears to replace in the Little Karoo.

Apolysis lactearia sp. nov.

This species, represented by only the female sex among the new accessions, can only be confused with ♀♀ of *thornei*. The differences are however of such a nature that they cannot be considered as merely varietal. From both the

typical and varietal forms of the ♀ *thornei* the ♀♀ of this new species differ as follows:

Body, including legs, almost entirely black; narrowish hind margins of tergites and only slightly broader ones of sternites pallid; narrow hind border of metapleurae also yellowish; articulating part below between tergites and sternites broadly yellowish; knees not tending to be slightly yellowish as in some ♀♀ of *thornei*; integument of body, including head, thorax above and scutellum, distinctly duller, mainly covered with greyish white bloom.

Vestiture with the hairs on body and legs distinctly very much denser and longer, more conspicuously so on abdomen, but also entirely whitish as in *thornei*.

Head with the frontal depression apparently less deep, especially that medial part of it in front of ocellar tubercle; antennal joint 3 relatively shorter, usually less than $2\frac{1}{2}$ times as long as broad, its apex beyond spine distinctly very much less produced than in *thornei*, the spine more terminal and itself slightly stouter; proboscis also slender, relatively long, 2.4–2.8 mm long; palps as in *thornei* section short, inconspicuous, not projecting much.

Wings distinctly more conspicuously milky whitish; veins also pale yellowish; first basal cell also much longer than second; costal cell apparently slightly narrower, the costal vein not so markedly curved outwards as in some ♀♀ of *thornei*; second posterior cell subparallel-sided and even slightly narrowed apically as in the *thornei* section; knobs of halteres entirely whitish.

From 3 ♀♀, including the holotype, in the South African Museum.

Length of body: about 2.6–3 mm

Length of wing: about 2.8–3 mm

Distribution

North-western Karoo: Augusfontein near Calvinia (Museum expedition, September 1947).

Apolysis namaensis sp. nov.

A ♀ specimen from Namaqualand also belongs to this section and is very near *lactearia* from which it differs in the following respects:

Frons scarcely, or less, impressed in front of ocellar tubercle, less shining along the middle, being mainly dull; proboscis relatively shorter, only about 2 mm long and distinctly stouter; antennal joint 3 with the humped part nearer, or just a little beyond, middle (in *lactearia* nearer apex), the spine however very similar and also almost terminal in position; legs distinctly stouter and shorter, the femora especially are stouter, and legs with relatively longer and much denser hairs; and wings milky whitish as in *lactearia*, but with the parts of costal and first veins between apex of false vein much darker, dark brown or blackish brown, not yellowish.

Length of body: about 3 mm

Length of wing: about 3 mm

Distribution

Namaqualand: Wallekraal on road to Hondeklipbaai (Museum expedition, October 1950).

Apolysis brachycera sp. nov.

Fig. 2C

Still another ♀ specimen from the western coastal region is referable to the *thornei* and *lactearia* section, differing from both *lactearia* and *namaensis* in the following respects:

Wings, though also milky whitish, with white and not yellowish veins; antennal joint 3 (cf. Fig. 2C) distinctly very much shorter or rather more ovate, scarcely more than $1\frac{1}{2}$ times as long as broad and its apical spine (even more terminal in position than in *lactearia* and *namaensis*) distinctly longer and more slender; legs distinctly much stouter and shorter, the femora being even stouter than in *namaensis* and basal joint of hind tarsi relatively shorter, distinctly much less than half length of hind tibia whereas in *lactearia* and *namaensis* it is about, or very little less than, half length of tibia; hairs on body, especially on abdomen, relatively shorter.

Length of body: about 3 mm

Length of wing: about 3 mm

Length of proboscis: about 1,88 mm

Distribution

West coastal region between Leipoldtville and Elands Bay (Museum expedition, October 1947).

Apolysis seminitens sp. nov.

Fig. 2E

This striking new species, which was also caught in the flowers of a species of *Mahernia* and which resembles the species *semiflava* superficially, however belongs to the *maherniaphila* section in which the eyes in the ♂♂ are broadly separated, the hairs on the body and legs are shorter and denser, and the legs are on the whole shorter and stouter. It is characterized as follows:

Body with the head, thorax and scutellum black, the thorax and scutellum above brilliantly shining; humeral angles and postalar calli reddish brown, especially in ♀; antennae and proboscis also sometimes reddish brown to blackish brown; abdomen and also hind margin of metapleural part in both sexes entirely very pale yellowish or pallid, the hind margins of both tergites and sternites sometimes even more broadly whitish; legs with the coxae and anterior and middle femora to beyond middle and to a variable and much lesser extent hind femora, or only outer or outer lower part of hind ones darkened yellowish brownish to dark brown or blackish brown, with the apical parts of the femora or sometimes most of the hind ones, the tibiae, and at least basal halves of tarsi very pale yellowish.

Vestiture with the fine tomentum or bloom on anterior part of frons on each side of antennae and on upper half of genae silvery greyish; hair on body and legs entirely whitish, relatively poorly developed, very short and sparse or almost absent on thorax above, that on head below, humeral angles, and across hind margin of scutellum longer, more conspicuous; that on abdomen however distinctly denser than on rest of body, much denser in ♂ than in ♀; hairs on legs much sparser and shorter than in most other species, being very short and scarcely detectable on tibiae.

Head with the eyes in ♂ broadly separated above, a little narrower than in ♀, about as wide as broad ocellar tubercle, in ♀ a little wider than tubercle; frons more deeply transversely depressed across middle in ♀ than in ♂; antennal joint 1 markedly short, transverse or bead-like, as long as, or scarcely as long as, the equally short and transverse bead-like second joint; joint 3 (cf. Fig. 2E) slightly elongate-oval to ovate, about $1\frac{3}{4}$ to twice as long as broad, broadest slightly beyond middle, its spine subterminal, quite half as long as broadest part of joint; proboscis about 1–1,4 mm long, slightly stouter in ♀; palps short, not conspicuous.

Wings conspicuously subopaquely milky whitish; veins pallid or whitish; first basal cell very much, or markedly, longer than second, and considerably more than twice as long as part of third vein between it and second submarginal cell; second posterior cell subparallel-sided, not diverging apically; knobs of halteres entirely whitish in both sexes.

Legs comparatively short and stoutish, the femora rather stout and hind ones markedly curved outwards; basal joint of hind tarsi comparatively short, very much less than half, usually nearly or about a third, length of hind tibiae; claws markedly long and slender, more than half length of last tarsal joint.

From 10 ♂♂ and 10 ♀♀, including the ♂ holotype and ♀ allotype, in the South African Museum.

Length of body: about 1,48–3,2 mm

Length of wing: about 1,88–3,08 mm

Distribution

Southern Namaqualand: Knersvlakte (Museum expedition, October 1950) (types). West coastal region: Papendorp at mouth of Olifants River (Museum expedition, October 1950).

From the similarly-coloured *semiflava* it may at once be distinguished by the separated eyes in the ♂, the more shining and polished thorax in both sexes, the relatively longer first basal cell, almost hairless tibiae, and the more strongly developed claws.

From *maherniaphila* Hesse (1938: 859) it may at once be distinguished by the entirely yellow abdomen, yellow tibiae, relatively shorter and stouter legs, shorter proboscis, relatively longer first basal cell, and denser hairs on abdomen.

Apolysis hirtella sp. nov.

Fig. 2G

Still another bicolorous new species, with the eyes separated in the ♂ and belonging to the *maherniaphila* section, is to be added here. It is characterized as follows:

Body with the head, thorax and scutellum black, dull, but with greyish white bloom sometimes evident on sides of antennal insertions and body above; ocelli reddish or reddish brown; humeral angles and postalar calli also reddish brownish or piceous; abdomen in ♂ variable in colour, either entirely or predominantly yellowish or with tergites 1 and 2 mainly dark or with only hind margins of segments broadly yellowish or yellowish red, and sometimes with the scoop-like last sternite (or tergite) mainly dark; abdomen in ♀ more constantly entirely yellowish or pallid, but sometimes with the bases of tergites, especially in basal half, or tergites 1-4, darkened to a variable extent as in ♂; antennae, proboscis and legs dark reddish brown, blackish brown to black, the femora more consistently dark, and tibiae usually more reddish brown, with the knees however yellowish.

Vestiture with the hairs on body and legs conspicuous, comparatively dense and long in comparison with many other species, denser and longer in ♂, especially on abdomen where they are characteristically erect and recurved forwards, entirely or predominantly silvery whitish, though those on abdomen in ♀ sometimes with a slight sericeous yellowish tint.

Head with the eyes in ♂ broadly separated above, on vertex even slightly wider than distance between outer margins of posterior ocelli, but slightly narrower than in ♀; transverse depression on frons slightly deeper and more evident in ♀; antennal joint 1 (cf. Fig. 2G) short, but distinctly longer than the very short second joint, sometimes nearly or about twice as long; joint 3 slightly elongate, elongate-oval to oval, about $1\frac{1}{2}$ to 2 times as long as broad, at broadest part usually a little beyond middle, its apex rotundately rounded, projecting a little beyond dorsal spine which is more subapical and markedly short and feeble; proboscis about 1.44-2.2 mm long; palps small, inconspicuous.

Wings, relative to body, long, distinctly tinted milky whitish; veins mainly pallid or pale yellowish, more whitish in hinder and basal half, the costal vein beyond apex of false vein to apex of wing and even round posteriorly to second posterior cell and sometimes also apical parts of posterior veins in this region darkened or markedly dark; costal cell markedly broad and outwardly curved at level of cross vein; first basal cell longer than second and distinctly longer than part of third vein between it and second submarginal cell; second posterior cell subparallel-sided; knobs of halteres entirely pallid or whitish, but sometimes with an indication of a dark spot above in some ♂♂.

Legs rather short and stoutish, the femora rather thick; basal joint of hind tarsi short, only about a third length of hind tibiae; claws short but strong.

From 6 ♂♂ and 6 ♀♀, including the ♂ holotype and ♀ allotype, in the South African Museum.

Length of body: about 1,8–2,72 mm

Length of wing: about 2,56–3,08 mm

Distribution

Koup Karoo (labelled Gouph): Laingsburg District (Museum staff, February 1938) (types); Lammerfontein in the Moordenaars Karoo near Laingsburg (Museum expedition, October 1952).

Easily recognized by its rather dense vestiture, erect and recurved hairs on abdomen of ♂, mainly yellowish abdomen, and stoutish legs, in which respects it also differs from *maherniaphila*.

From *semiflava* and *seminitens*, which also have a mainly or entirely yellowish abdomen, it differs in being distinctly more hairy, and from the former species in the separated eyes in the ♂, and from the latter in being more hairy, in not having a smooth and shining front part of the body, entirely dark or black legs, etc.

REVISED KEY TO THE KNOWN SOUTH AFRICAN SPECIES OF *Apolysis*

- 1 (a) First basal (cf. Fig. 2D) cell in wings as long as, or scarcely, or only a little longer than second, and as long as, or subequal to, or sometimes even shorter than, part of third vein between it and apical cell (if longer first basal cell only slightly longer than second); second posterior cell widely divergent apically; wings rarely with a very distinct milky whitish tint (if so first basal cell not long); palps usually elongate, conspicuously projecting (if short other characters do not differ) 2
- (b) First basal cell (cf. Fig. 2F) distinctly much longer than second and distinctly much longer than part of third vein between it and apical cell; second posterior cell subparallel-sided, sometimes even slightly narrowed apically; wings usually with a more distinct, sometimes conspicuous, milky whitish tint; palps usually much shorter, or very short and insignificant 12
- 2 (a) Palps longer or elongate, conspicuously visible, projecting much beyond buccal cavity; antennal joint 3 distinctly longer, more elongate, much more than 2,5 times as long as broad and usually equally long or broad in both sexes; wings more elongate, relatively narrower, cinereous hyaline, cinereous, or even distinctly dusky or infuscated, the veins distinctly darker; larger forms, usually much more than 2 or 2,5 mm long 3
- (b) Palps much shorter or very short, insignificant, not easily visible, either hidden in buccal cavity or not conspicuously projecting; antennal joint 3 distinctly relatively shorter, more oval or ovate, or not much more than 2 or 2,5 times as long as broad and either shorter or broader and more distinctly ovate in ♀♀; wings relatively shorter and broader, clear hyaline or with a faint or distinct milky whitish tint, the veins paler, more yellowish; smaller or minute forms, usually less than 2 or 2,5 mm long . . . 10
- 3 (a) Hairs on head, occiput and genae, on thorax and scutellum above either entirely pale or whitish like rest of hairs on body and legs, or with fewer dark ones and then not on all the parts mentioned; wings clearer or only faintly greyish hyaline and with a more milky whitish subopacity in certain lights; apical part of antennal joint 3 beyond spine-like process slightly, but distinctly, more produced or apical margin above, just beyond spine, distinctly more indented or incised 4
- (b) Hairs on head, occiput and sometimes genae and on thorax above and scutellum distinctly not white, darker or black, or with more numerous dark ones; wings darker, distinctly more cinereous, dusky or infuscated, the subopacity more greyish

- than whitish; apical part of antennal joint 3 beyond spine usually less produced, more rotundately rounded, the apical margin above, just beyond spine, usually less incised 11
- 4 (a) Abdomen with the hind margins of tergites and sternites broader, more conspicuously, yellowish or pallid, or the venter itself may be mainly yellowish; antennal joint 3 with the prominence on dorsal margin, just before subapical excavation, less sharply or angularly prominent, the joint thus less humped in appearance 5
- (b) Abdomen with the hind margins of the tergites and sternites only very narrowly or obscurely pallid or yellowish, greater part of venter not mainly yellowish; antennal joint 3 with the prominence, just before apical excavation, distinctly more sharply or angularly prominent, giving joint a more humped appearance 10
- 5 (a) Body above, especially abdomen, dull, not shining; hind margins of tergites less broadly pallid or yellowish; sternites in some ♀♀, and sometimes in some ♂♂ also, more broadly yellowish or even entire venter yellowish; hairs on body more whitish or entirely sericeous whitish; proboscis on the whole relatively shorter, stouter, usually only about 0,6-1 mm long 6
- (b) Body above, especially abdomen above, distinctly more shining; hind margins of tergites more broadly, more conspicuously, ivory yellowish or yellowish; greater discal part of venter, even in ♀♀, not conspicuously yellowish; hairs on occiput, thorax above or only basally, and on scutellum, and sometimes on abdomen above to a certain extent, distinctly more yellowish or even darker, not whitish; proboscis relatively longer, usually about 1-2 mm 8
- 6 (a) Legs distinctly paler, more reddish brown, the tibiae and tarsi even paler; entire venter, even in ♂, distinctly yellowish; hairs on body distinctly denser, more shaggy; wings relatively shorter, the veins paler, more yellowish brown; second submarginal cell relatively short, shorter than part of third vein between it and first basal cell; proboscis about 1,33 mm long ♂ *xanthogaster* Hesse
- (b) Legs on the whole darker or entirely black; entire venter in known ♂♂ not yellowish; hairs on body distinctly less dense, sparser; wings more elongate, the veins darker brown to dark brown; second submarginal cell normally long, subequal in length to, or even slightly longer than, part of third vein between it and first basal cell; proboscis relatively shorter, about 0,6-1 mm long 7
- 7 (a) Wings more greyish hyaline; hind margins of sternites in ♀ more broadly yellowish, even entire venter yellowish; antennal joint 1 distinctly longer than joint 2; palps more slender, relatively longer, distinctly longer than antennal joint 3; interocular space in ♀, at narrowest part, on vertex relatively narrower, subequal to length of antennal joint 3; knobs of halteres in ♀ entirely whitish ♀ *monticola* sp. nov.
- (b) Wings more distinctly tinted subopaquely milky whitish; hind margins of sternites apparently less broadly yellowish, the entire venter not yellowish; antennal joint 1 markedly short, subequal in length to, or very little longer than, 2; palps shorter, stouter, relatively shorter, subequal in length to, or scarcely longer than, antennal joint 3; interocular space on vertex in ♀ relatively broader, distinctly broader than length of antennal joint 3; knobs of halteres either entirely whitish or slightly darkened above in ♀, consistently darkened above in ♂ ♂ ♀ *capicola* sp. nov.
(more especially some ♀♀)
- 8 (a) Rim of buccal cavity ivory yellowish; hind margins of tergites more broadly ivory yellowish; knees slightly yellowish and tibiae and tarsi tending to be less dark than femora; hairs on occiput and thorax above more straw-coloured yellowish; knobs of halteres slightly darkened above towards base; proboscis slightly longer, about 2 mm long; antennal joint 1 slightly longer, longer than 2; slightly larger form, about 3,5 mm long, with a wing-length of about 4 mm ♀ *cingulata* Hesse
- (b) Rim of buccal cavity dark or dark reddish brown; hind margins of tergites only very narrowly ivory yellowish; legs, including knees, entirely dark or black; hairs on occiput and thorax anteriorly whitish, those on base of thorax above and on scutellum dark or blackish; knobs of halteres entirely pale yellowish white above; proboscis shorter, only about 1 mm long; antennal joint 1 shorter, scarcely longer than 2; smaller form, about 2,2 mm long, with a wing-length of about 2,4 mm
♀ *thamnophila* sp. nov.

- 9 (a) Antennal joint 1 much longer, at least twice length of 2; prominence in front of subapical excavation on joint 3 above more angularly prominent; proboscis distinctly more slender, thinner; palps more slender, longer than antennal joint 3; wings more greyish hyaline, not or scarcely tinted faintly milky whitish, the veins darker brownish to blackish brown; hind margins of tergites and sternites in both sexes narrowly, or scarcely, pallid; knobs of halteres in ♀♀ usually entirely white . . . 10
- (b) Antennal joint 1 markedly short, about as long as, or only a very little longer than, 2; prominence on dorsum of joint 3 less angularly prominent; proboscis distinctly stouter, appearing shorter; palps relatively shorter and stouter, shorter, or at least not much longer, than antennal joint 3; wings distinctly tinted more subopaquely whitish, the veins more yellowish brown; hind margins of tergites and sternites in some ♀♀ relatively more broadly yellowish; knobs of halteres in some ♀♀ darkened above as in ♂♂ ♂♀ *capicola* sp. nov.
- 10 (a) Smaller species, about 1,8–2 mm long, with a wing-length of about 2,12–2,4 mm; wings faintly more greyish or cinereous, more so in ♂, the veins darker, dark brownish to blackish brown; apical stalk of anal cell relatively longer, usually a little longer than apical cross vein of second basal cell; narrow pallid hind margins of tergites and sternites, even in ♀, tending to be less constant, more obscure; hairs on body and legs shorter, sparser, and fine ones on hind tibiae relatively shorter, less conspicuous ♂♀ *stuckenbergi* sp. nov.
- (b) Slightly larger species, about 2,4–3 mm long, with a wing-length of about 3–3,2 mm; wings less greyish, with a more distinct whitish subopacity, the veins slightly paler, more yellowish brown; apical stalk of anal cell relatively shorter, subequal to, or even shorter than, apical cross vein of second basal cell; narrow pallid hind margins of tergites and sternites, in ♀ at least, more constantly present, especially the more broadish ones on sternites; hairs on body and legs longer, slightly darker, and fine hairs on hind tibiae relatively longer, more conspicuous
♀ *oreophila* sp. nov.
- 11 (a) Wings clearer, less dusky or infuscated, only greyish hyaline or tinted slightly cinereous, the veins more reddish brown; part of third vein between first basal cell and apical cell tending to be longer, subequal to, or only a little shorter than, latter cell; knobs of halteres in ♂ darkened above only; hind margins of tergites and sternites in both sexes less conspicuously, or broadly, yellowish, only narrowly or obscurely pallid; hairs on body less extensively dark or black, those on head below, on abdomen, and on legs, even in ♂, paler or more whitish; hump before apical excavation on antennal joint 3 less prominent ♂♀ *humilis* Loew
- (b) Wings distinctly dusky, more infuscated, or smoky brownish, even more so in ♂, the veins darker, very dark brown, blackish brown, or even black; part of third vein between first basal cell and apical cell tending to be markedly shorter than apical cell; knobs of halteres in ♂ usually darkened above and below; hind margins of tergites and sternites, in ♀ especially, more conspicuously yellowish and even more broadly so on venter; hairs on body more extensively dark or black, those on head below, on abdomen and legs in ♂ tending to be black, in ♀ more yellowish, yellowish brown to brown (if paler other characters do not differ); hump before apical excavation on antennal joint 3 more prominent or even knob-like
♂♀ *fumalis* Hesse
- 12 (a) Slightly larger, more bulky species, about 1,5–2,5 mm long, with a wing-length of about 1,5–2,5 mm; body duller, with more conspicuous, denser, greyish white bloom, in ♀ especially, with two rows of velvety black quadrangular patches on abdomen above (those on tergites 2 and 3 the largest), and with black patches on thorax; proboscis much shorter, stouter, only about 0,4–0,6 mm long; wings more conspicuously milky whitish, their first basal cell distinctly longer than part of third vein between it and apical cell and latter also considerably longer than this part; apical stalk of anal cell shorter, less than twice width of base of third posterior cell; hairs on body and legs much denser, longer, markedly so in ♀; eyes in ♂ in actual contact for some distance in front of ocellar tubercle. . . ♂♀ *brevirostris* Hesse
- (b) Very much smaller, or minute, less bulky species, only about 1,2–1,7 mm long, with a wing-length of about 1,5–1,9 mm; body either less dull and with much feebler

- greyish bloom, or smooth and shining, without any bloom, without any distinct, conspicuous, black, velvety patches on abdomen; proboscis, relative to body, much longer, more slender, about 0,68–1,5 mm; wings tinted more faintly milky whitish, the first basal cell distinctly shorter than, or only subequal in length to, part of vein between it and apical cell, and latter sub-equal in length to, or even shorter than, same part; apical stalk of anal cell longer, quite or at least twice length of base of third posterior cell; hairs on body and legs either much sparser and shorter, or very sparse and short; eyes in known ♂♂ broadly separated, only a little narrower than in ♀♀ 13
- 13 (a) Head and body smooth, shining, polished, without any greyish tomentum; hind margins of tergites and sternites, especially in ♀, more broadly and more conspicuously yellowish; hairs on head, body and legs minute or absent in ♀, very sparse and short on thorax and abdomen in ♂; legs shorter, the tarsi shorter and basal joint of hind ones much shorter than half length of hind tibia; veins in hinder part of wings paler yellowish or becoming paler distally; hind margin and microtrichial hairs in wings very pale or whitish; first basal cell as long as second; anterior part of frons distinctly more convex or subtumid; proboscis in ♀ slightly less stout, reaching the length of 1,9 mm ♂ ♀ *minuscula* sp. nov.
- (b) Head and body more dulled to a variable extent by fine greyish tomentum; hind margins of tergites and sternites, even in ♀, only narrowly, scarcely, or obscurely, pallid or yellowish; hairs on head and body, especially abdomen and legs, even in ♀, distinctly denser and longer, those on hind tibiae distinctly longer, more evident; legs relatively longer, the tarsi longer, and basal joint of hind ones quite or nearly half length of hind tibia; veins in wings darker; hind margin of wings and microtrichial fringe dark; first basal cell slightly longer than second; frons anteriorly less convex; proboscis, even in ♀, rather stoutish and short, only about 0,68 mm long
♀ *lindneri* Hesse
- 14 (a) Eyes in ♂♂ in actual contact above for some distance, about $2\frac{1}{2}$ to nearly 3 times length of ocellar tubercle, and with the upper facets distinctly much coarser than lower ones; distance between posterior ocelli in ♀♀ subequal to, as long as, or scarcely perceptibly longer than, distance between them and inner margin of eyes; vestiture on body and legs usually longer, even if sparse, and that on abdomen, especially in ♀♀, sometimes tending to be less dense; legs on the whole more slender, longer, the basal joint of hind tarsi usually relatively longer, at least half length of hind tibiae 15
- (b) Eyes in ♂♂ widely separated above by a broad space which is only a little narrower than that of ♀♀, and with the upper facets not coarser than lower ones; distance between posterior ocelli in ♀♀ distinctly or perceptibly longer than distance between them and inner margin of eyes; vestiture on body and legs on the whole shorter, usually denser, and that on abdomen, especially in ♀♀, usually markedly denser; legs on the whole shorter, stouter, the basal joint of hind tarsi usually shorter, much shorter than half length of hind tibiae 21
- 15 (a) Legs either entirely dark or black or, if tibiae and tarsi are paler, they are not pallid or pale yellowish; yellow on abdomen distinctly less developed, the hind margins of tergites and sternites in known ♂♂ either not yellowish or pallid or only narrowly, obscurely and less conspicuously so, and in ♀♀ abdomen is not entirely or predominantly yellowish, at most with only broadish pallid or yellowish hind margins; wings slightly less conspicuously milky whitish and, if so, veins tend to be more yellowish than whitish or pallid and, if whitish, legs are dark; proboscis relatively longer, usually more than 1,5 mm 16
- (b) Legs on the whole much paler, the femora more yellowish brownish or brownish and greater part of tibiae and tarsi, excluding only the brownish apical parts of latter and sometimes slightly brownish apices of tibiae, entirely or predominantly pale yellowish; yellow on abdomen more developed, the entire or greater part of abdomen in ♀ very pale yellowish or pallid, and in ♂ with broader pallid or yellowish hind margins, sometimes very broad on sides, and with last elongated sternite entirely or predominantly yellowish or at least with much yellowish; wings more conspicuously subopaquely milky whitish, the veins very pallid or whitish; proboscis relatively short, only about 1,12–1,48 mm long ♂ ♀ *semiflava* sp. nov.

- 16 (a) Integument of body above, especially thorax and scutellum, and in ♀ also entire or greater part of frons, more shining, less dull, not densely covered with greyish white bloom; antennal joint 3 more elongate, relatively longer, about 2.5–3 times as long as broad, its apex beyond subapical spine distinctly, though slightly, more produced, more rounded, the spine thus distinctly more subapical in position; frontal depression in ♀♀ relatively deeper and medial part in front of anterior ocellus also distinctly deeper; wings either not distinctly milky whitish or tinted less so; hairs on body and legs, especially on abdomen, and more so in ♀♀, distinctly shorter and sparser 17
- (b) Integument of body above and in ♀ also greater part of frons distinctly duller, very densely covered with greyish white bloom; antennal joint 3 less elongate, shorter, not more than, usually less than, 2 times as long as broad, its apex beyond spine distinctly not produced, the spine appearing more terminal; frontal depression in ♀♀ less deep, especially the medial part in front of anterior ocellus; wings more conspicuously subopaquely milky whitish; hairs on body and legs, especially on abdomen, even in ♀♀, distinctly longer, more shaggy and relatively denser 19
- 17 (a) Wings with a distinct, though faint, milky whitish tint; costal cell relatively broad at middle, its anterior margin more curved outwards near cross vein; knobs of halteres in ♂♂ usually either entirely dark above or darkened above to a variable extent; abdomen in ♀♀ with the hind margins of tergites and sternites yellowish to a variable extent, more so apically; anterior part or half of frons, genae, and abdomen above in ♀♀ distinctly duller ♂ ♀ *thornei* Hesse (and forms of it)
- (b) Wings more vitreous hyaline, without any perceptible milky whitish tint; costal cell appearing narrower, its anterior margin not markedly curved outwards; knobs of halteres, in known ♂♂, entirely whitish or pallid; abdomen in known ♀♀ entirely black or with scarcely any indication of yellowish hind margins; entire frons and body above in ♀♀ shining . . . a distinct ♀ form of *thornei* Hesse and some ♂♂ (18)
- 18 (a) Base of wings up to cross vein in costal cell more subopaquely whitish
♂ form of *thornei* Hesse
- (b) Base of wings up to cross vein distinctly more opaquely yellowish
♂ form of *thornei* Hesse
- 19 (a) Veins in wings distinctly more yellowish; antennal joint 3 distinctly more elongate, at least twice as long as broad, its apical spine relatively stouter and shorter; legs relatively longer, the basal joint of hind tarsi longer, only a little less than, or nearly, half length of hind tibiae; hairs on abdomen relatively longer 20
- (b) Veins in wings white or whitish; antennal joint 3 distinctly shorter, more ovate, scarcely more than 1.5 times as long as broad, its apical spine distinctly more slender and longer; legs relatively stouter and shorter, the basal joint of hind tarsi shorter, distinctly much less than half length of hind tibiae; hairs on abdomen relatively shorter ♀ *brachycera* sp. nov.
- 20 (a) Frons more distinctly and more deeply depressed in front of ocellar tubercle, also more shining along middle; proboscis slightly longer, more slender, about 2.48–2.9 mm long; humped part of antennal joint 3 nearer apex; legs distinctly more slender, longer, the femora more slender, with relatively shorter hairs; part of costal vein and first main vein beyond apex of false vein yellow or more yellowish, the costal vein only slightly darkened apically ♀ *lactearia* sp. nov.
- (b) Frons scarcely or less impressed in front of tubercle, less shining along middle, mainly dull; proboscis distinctly shorter and stouter, only about 2 mm long; humped part of antennal joint 3 nearer, or just a little beyond, middle; legs distinctly shorter and stouter, the femora distinctly stouter, with relatively longer hairs; part of costal vein and first vein, beyond apex of false vein, much darker, dark brown or blackish brown ♀ *namaensis* sp. nov.
- 21 (a) Abdomen not predominantly or entirely yellowish or pallid in both sexes, only hind margins of tergites and sternites being yellowish to a variable extent, much less so, or only narrowly so, in ♂; legs distinctly longer, more slender, the femora relatively less stout, and basal joint of hind tarsi relatively longer, about, or a little less than, or even a little more than, half length of hind tibiae; proboscis on the whole longer, reaching up to 2 mm; hairs on abdomen, even in ♂, sparser ♂ ♀ *maherniaphila* Hesse

- (b) Abdomen predominantly or entirely pallid or yellowish, or with broader yellowish hind margins, in ♂♂, and entirely so in ♀♀; legs distinctly shorter, stouter, the femora relatively thicker and stouter, and basal joint of hind tarsi shorter, usually very much less than half length of hind tibiae; proboscis on the whole shorter, less than 2 mm; hairs on abdomen, even in ♀♀, denser, sometimes markedly dense and conspicuous 22
- 22 (a) Integument of head above, thorax, and scutellum brilliantly shining, smooth and polished in appearance; hairs on body and legs, especially on thorax and scutellum, less developed, sparser, those on abdomen not so markedly recurved forwards; abdomen in both sexes entirely pallid or very pale yellowish; legs with more yellowish, sometimes mainly yellowish or with at least apical parts or halves of femora, entire tibiae, and basal halves of tarsi pale yellowish, and the hind femora tending to be more curved; antennal joint 1 very short, not or scarcely as long as second; antennal joint 3 more narrowed basally, its spine much longer and more apically situated; costal cell less markedly broad, its anterior vein not so convexly arched; first basal cell relatively longer ♂ ♀ *seminitens* sp. nov.
- (b) Integument of head above, thorax, and scutellum dull, densely covered with greyish white bloom; hairs on body and legs, even on thorax above, distinctly markedly denser, those on abdomen above, especially in ♂, markedly upright or recurved forwards; abdomen in ♂ sometimes with the bases of tergites darkened to a variable extent and in ♀ sometimes with only hind margins of sternites yellowish to a variable extent; legs mainly or entirely dark, dark castaneous brown to black, only the knees yellowish, and with the hind femora less markedly curved; antennal joint 1 a little or distinctly longer than 2; antennal joint 3 on the whole broader, less narrowed basally, its apical spine much feebler, more dorsal or subapical in position; costal cell broader, more markedly dilated, its anterior vein convexly arched; first basal cell relatively shorter ♂ ♀ *hirtella* sp. nov.

Genus *Oligodranes* Loew

Oligodranes: Hesse, 1938: 861. Hull, 1973: 219.

As is stated under the subfamily Usiinae in this paper the genus *Oligodranes* is the other genus, formerly placed in the subfamily Phthiriinae, which Hull, in his recent monograph of the genera of the Bombyliidae, transferred to the subfamily Usiinae.

In view of the discovery of four additional South African species of this genus, which I take to be the South African counterpart of the Palaearctic form and of which I gave a supplementary description in 1938 based solely on the South African representatives, the following supplementary notes on the genus should now be added:

The South African forms seem to show distinct colour differentiation in the two sexes. All the known ♂♂ are consistent in being predominantly or entirely black; the yellow colouring on body and legs being much reduced or almost absent. The ♀♀ on the other hand always show more extensive yellow colouring or a striking pattern of yellow or pallid markings on the head, thorax, pleurae, and abdomen.

As far as cephalic characters are concerned it is to be noted that the eyes in ♂♂ are not always in contact above; these in some species are widely separated as in the case of the ♀♀. In this respect they agree with ♂♂ of some species in the genus *Apolysis*. In the latter genus however the last tergite (or sternite) in the ♂♂ is scoop-like and the genitalia are prominent, thus rendering

differentiation between the sexes easy. In *Oligodranes* the genitalia of the ♂♂ are very small, insignificant, usually hidden or not easily seen. Confusion of the sexes is therefore not excluded if the eyes of the ♂ are broadly separated as in the ♀. Such a mistake was made by me in 1938 in the case of the supposed ♀ of *namaensis* Hesse (see below).

As in the case of species of *Apolysis* most of the South African representatives of *Oligodranes* frequent flowers and in the latter case mostly those of species of *Mesembryanthemum*.

Oligodranes namaensis Hesse

Oligodranes namaensis Hesse, 1938: 864, fig. 263b.

Since my description of this species in 1938 the Museum has acquired a long series of both sexes of this species. As they were caught together frequenting the flowers of species of *Mesembryanthemum* and also show certain characters in common there can be no doubt that the sexes belong to the same species.

This discovery necessitates the correction of an error in identification made by me in 1938. A comparison of the real ♀ of *namaensis* with the supposed ♀ allotype of *namaensis* has not only shown that the latter is not the ♀ of *namaensis*, but that it is a ♂ with separated eyes belonging to another species which is described below as a new species. Only the characters given for the ♂ specimen of *namaensis* are therefore valid in my description of 1938. A supplementary redescription of this species, which also includes the real and differently-coloured ♀, is given here to render its recognition more easy:

Body and legs in ♂ mainly black, with the frons in front to a variable extent, palps, humeral angles and anterior spiracular area to a variable extent, an infusion just below base of wings, postalar calli to a variable extent, metapleural part just below halteres, ligamentous connection between squama and scutellum, very narrow hind margins of tergites and broader ones of sternites pallid or yellowish; knees of ♂ usually also yellowish.

Body in ♀ also partly black, but with the following parts very pale yellow: sides of frons in middle, anterior part of frons, entire genae, palps, greater part of head below, occiput broadly behind eyes (except broadish, black, central, postvertical stripe and middle part of occiput), triangular humeral spot, a broad spot just below it, notopleural part, postalar calli broadly, broadish base of thorax (or two spots), entire scutellum, propleural spot, anterior spiracular part, prosternal part, area just below wing-bases, a longitudinal fascia along middle of pleurae, greater part of metapleural region, fairly broadish hind margins of tergites, broader hind margins of sternites or sometimes almost entire venter, entire coxae (excepting only a brownish anterior basal spot on hind ones), and the femora (excepting only the brownish anterior upper surfaces, or spots, in apical halves, especially of hind ones).

Vestiture with the hairs sparse, longer in ♂, shorter and denser on abdomen

in ♀, entirely pale or whitish, though with slight sericeous yellowish gleams on abdomen in ♀.

Head with the eyes above in ♂ in actual contact for a distance at least twice length of ocellar tubercle; interocular space on vertex in ♀ quite twice width of ocellar tubercle; transverse depression across middle of frons in ♀ rather deep and conspicuous; antennal joint 1 about $1\frac{1}{2}$ –2 times length of joint 2; joint 3 about $1\frac{2}{3}$ –2 times combined length of joints 1 and 2; proboscis 1,12–1,4 (average 1,2) mm long; palps slender, subequal in length to, or about as long as, antennal joint 3.

Wings hyaline, iridescent, with a very feeble milky whitish tint in certain lights, more detectable at base; veins yellowish brown to brown, more yellowish at base; middle cross vein at about between basal third and basal fourth of discoidal cell; first basal cell usually a little shorter than distance of third vein between it and base of second submarginal cell and latter cell, along lower vein, also distinctly shorter than this part of third vein; knobs of halteres entirely pallid or whitish in both sexes.

Hypopygium of ♂ as shown in figure 263b (Hesse 1938: 864).

From 12 ♂♂ (including original ♂ holotype) and 34 ♀♀.

Length of body: about 1,88–2,28 mm

Length of wing: about 2,2–2,6 mm

Distribution

Namaqualand: Kamieskroon (Museum staff, September 1930) (♂ holotype). Bushmanland: Aggenys between Springbok and Pella (Museum staff, October 1939) (♂♂, ♀ allotype and ♀ paratypes). West coastal region: Citrusdal District (Museum expedition, November 1948) (♂♂).

Oligodranes triseriatellus sp. nov.

Fig. 3A, C

This slightly variable species, which was also caught on the flowers of a species of *Mesembryanthemum*, is very near *namaensis*. From the latter it however differs in the following respects:

Body in ♂ with the hind margins of tergites and sternites distinctly much more broadly and more conspicuously yellow, sometimes extensively so; body in ♀ with the distribution of black and yellow variable, differing from ♀ of *namaensis* in having the entire occiput behind ocellar tubercle and entire frons (excepting sometimes for a much narrower median dark spot or line about middle) yellow, sides and base of thorax above distinctly much more broadly and extensively yellow, the part on each side above wing-base also continuously yellow, isolating a rather conspicuous, round, black spot or peninsula on each side, in having the pleurae more extensively yellow (sometimes with only a large black spot in upper half of mesopleuron), with the yellow on abdomen above much more extensive than in *namaensis*, the hind margins very broadly

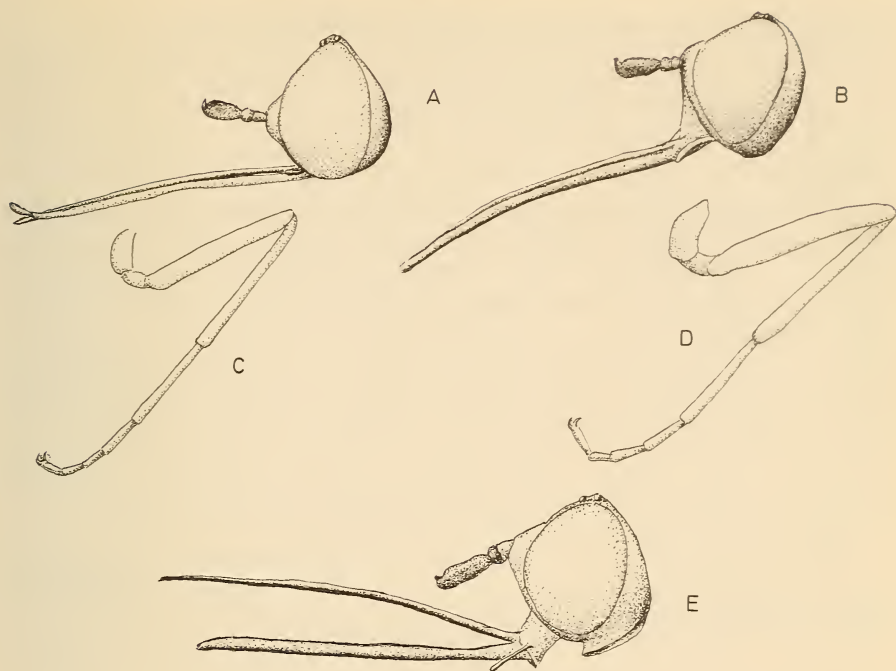


Fig. 3. Left side views of heads and left hind legs of some new species of *Oligodranes*.
(All to the same scale.)
A. ♂ *triseriatellus*; B. ♂ *anomalus*; C. ♂ *triseriatellus*; D. ♂ *anomalus*; E. ♀ *puberulus*.

so, reducing or more often breaking up the black basal parts of tergites into three longitudinal rows of black spots or patches which become smaller posteriorly and which, in some specimens, are even absent in posterior half of abdomen or very much reduced in size, almost the entire abdomen being yellowish; legs in ♀ often also with more yellowish on the tibiae or on middle of tibiae, especially hind ones, and with the brownish infusions on upper or anterior parts of femora in apical halves usually also more conspicuous.

Head (cf. Fig. 3A) with antennal joint 1 tending to be partly yellowish in ♂ and entirely yellowish in ♀; proboscis on the whole comparatively longer, 1,2–1,8 mm; palps also shorter, usually even less conspicuous, usually distinctly shorter than antennal joint 3.

Wings with the veins on the whole paler, more yellowish; distance between middle cross vein and base of second submarginal cell relatively shorter, especially in ♂, usually only a little, or scarcely, longer than lower vein of cell itself whereas in *namaensis* this distance is more constantly markedly longer; middle cross vein with a tendency to be farther away, at least at, or slightly more than, basal third of discoidal cell.

Legs with the left hind one of ♂ shown in Figure 3C.

From 4 ♂♂ and 15 ♀♀, including the types, in the South African Museum.

Length of body: about 1,72–3,28 mm

Length of wing: about 2,12–3,68 mm

Distribution

Bushmanland: Pofadder (Museum staff, October 1939) (types and paratypes); Aggenys between Springbok and Pella (Museum staff, October 1939) (paratypes). North-western Cape: Putsonderwater (Museum staff, October 1939) (paratypes). Great Karoo: Richmond District (Museum staff, November 1939) (♀ paratype).

As is evident from the description this species appears to be variable not only in size, but also in the extent of the yellowish or black colouring on the head, abdomen and legs in ♀♀. Some ♀♀ have the three rows of black spots on the abdomen less isolated or larger, tending to coalesce into black basal bands across the tergites; in others the spots are small and the tibiae yellowish to a variable extent, sometimes almost entirely yellowish.

The ♀ paratype from Richmond has not only a tendency for the three series of black basal spots on tergites 1–3 to coalesce but also to have a dark medial postvertical stripe on the occiput as in ♀ of *namaensis*.

Oligodranes puberulus sp. nov.

Fig. 3E

Another new species caught on flowers of a species of *Mesembryanthemum* is characterized as follows:

Body and legs mainly black in both sexes, but in ♂ with the frons in front and upper half of genae, palps, humeral angle, margins of anterior spiracle, notopleural ridge, area just below wing-bases, postalar calli, ligamentous connection between squama and scutellum, metapleural part just below halteres, and narrow hind margins of tergites and sternites pale yellowish or pallid, the hind margins of tergites being more whitish; the following parts in ♀ are very pale yellowish or pallid; front part or half of frons, genae, palps, head below anteriorly and continuous broadly to halfway up on each side behind eyes, humeral tubercle and anterior spiracular area, notopleural ridge, more extensive area below wing-basis, postalar calli, ligamentous connection, hind border of scutellum, hind margins of tergites (slightly broader than in ♂) and broader hind margins of sternites, prosternal part to a variable extent, propleural part just above front coxae, a longitudinal band along middle of pleurae, and greater part of metapleural region in front of and below halteres; knees in ♂ yellowish red and in ♀ more yellowish as well as apices of coxae, especially front ones; integument of body dull, with greyish bloom, especially in ♂.

Vestiture with the hairs longer and much denser than in *namaensis*, longer in ♂ than in ♀, entirely silvery whitish.

Head (cf. Fig. 3E) with the eyes in ♂ in contact above for a distance about $2\frac{1}{3}$ times length of ocellar tubercle, the line of contact rather deeply impressed and facets in upper half of eyes rather coarse; interocular space on vertex in ♀ about twice width of ocellar tubercle; transverse frontal depression in ♀ deep and distinct; antennal joint 1 about $1\frac{1}{2}$ –2 times length of small transverse joint 2; joint 3 at least twice length of joints 1 and 2 combined, subparallel-sided, its dorsal subapical spine short and rather stoutish; palps appearing rather long, conspicuously visible, almost, or about, as long as antennal joint 3; proboscis about 1,4–1,68 mm long.

Wings vitreous hyaline, iridescent; veins yellowish; middle cross vein at about, or a little more than, a third of discoidal cell; part of third vein between middle cross vein and second submarginal cell distinctly shorter than length of latter cell; knobs of halteres entirely whitish, pallid, or yellowish in both sexes.

From 2 ♂♂ and 2 ♀♀, including the type specimens, in the South African Museum.

Length of body: about 2,6–3,08 mm

Length of wing: about 2,88–3,4 mm

Distribution

Bushmanland: Aggenys between Springbok and Pella (Museum staff, October 1939) (types); Pofadder (Museum staff, October 1939).

From both *namaensis* and *triseriatellus* this species may at once be distinguished by the much denser and longer vestiture, the relatively more conspicuous and longer palps, the comparatively longer second submarginal cell in relation to part of third vein between it and middle cross vein, the position of the latter cross vein, and in ♀ the less extensive yellow markings on head and body.

Oligodranes flavifemoris sp. nov.

This species resembles *puberulus* very closely, but differs from it in the following respects:

Body with the integument of the frontal triangle, sides of face and upper parts of genae in ♂ entirely dark, not yellowish, but covered with pale or greyish white bloom; head below in ♀ slightly more extensively yellowish; hind margins of tergites in ♀ distinctly more broadly pallid or yellowish, sometimes occupying nearly half of tergites posteriorly; hind margins of sternites in both sexes distinctly very much more broadly yellowish, the entire venter in some ♀♀ sometimes tending to be yellowish; legs with the coxae and femora in ♀ mainly and conspicuously yellow, not black as in ♀ *puberulus*, only the upper or anterior surfaces in apical halves of at least front and hind femora darkened or brownish to a variable extent as in ♀♀ of *namaensis*.

Vestiture as dense as in *puberulus*.

Head with antennal joint 1 apparently a little longer, especially in ♀, quite $2\frac{1}{2}$ times as long as small transverse joint 2; proboscis about 1,2–1,66 mm long.

Wings, even though faintly tinted milky whitish, distinctly more so than in *puberulus*; veins slightly darker, more brownish; knobs of halteres in ♂ darkened above.

From 1 ♂ and 8 ♀♀, including the types, in the South African Museum.

Length of body: about 2,32–3,64 mm

Length of wing: about 2,6–3,6 mm

Distribution

Southern coastal region: Pearly Beach in the Bredasdorp District (Museum staff, December 1958) (types). Koup Karoo: Laingsburg District (Museum staff, February 1938). West coastal region (Olifants River Valley): Bulhoek between Clanwilliam and Klawer (Museum expedition, October 1950).

Oligodranes anomalus sp. nov.

Fig. 3B, D

Oligodranes namaensis (described as ♀) Hesse, 1938: 864, fig. 263a (n. syn.).

As has been stated in my supplementary redescription of *namaensis* in this paper, the discovery of the real ♀ of the latter species eliminates the specimen described by me in 1938 as the ♀ of *namaensis*. This specimen moreover is not a ♀ but a ♂ in which the eyes are broadly separated above as in ♀♀ of this genus. It belongs to a newly discovered section of *Oligodranes* in which the ♂♂ are not holoptic but dichoptic as in ♀♀ where the eyes are not in contact above but widely separated. This representative of the section by itself is characterized as follows:

Body and legs mainly black, but with the following parts pale yellowish or pallid: extreme anterior part (around antennal insertions) of frons, genae, buccal cavity, palps, humeral angles and anterior spiracular area, notopleural fold, area just below wing-bases, postalar calli and area below it, ligamentous connection between squama and scutellum, part of metapleural region below halteres, hind margin of metapleural part, narrow hind margins of tergites and sternites, and hind margin of last sternite (or tergite); coxae and legs more deep dark reddish brown than black, the apices of coxae, especially front ones, and the knees slightly paler, more yellowish reddish; integument dull.

Vestiture with the hairs on body and legs sparse, slightly denser on abdomen, entirely pale or whitish.

Head (cf. Fig. 3B) with the eyes broadly separated above, about $1\frac{2}{3}$ times width of ocellar tubercle; frons almost parallel-sided, slightly depressed centrally at about middle, not deeply and transversely as in ♀♀ of *Oligodranes*; antennal joint 1 (cf. fig. 263a in Hesse 1938: 864 and Fig. 3B) very short, only a very little longer than joint 2; joint 3 about twice as long as joints 1 and 2 combined, about $2\frac{2}{3}$ as long as broad, its subterminal spine short, but rather stoutish; palps about as long as antennal joint 3, but not easily seen at base of proboscis; proboscis about 1,08 mm long.

Wings hyaline, iridescent, with a very faint whitish subopacity in certain lights; veins yellowish brown; middle cross vein at a little more than basal third (6: 15) of discoidal cell; part of third vein between cross vein and second submarginal cell shorter than latter cell; knobs of halteres entirely whitish.

Legs with the left hind one shown in Figure 3D.

From a single ♂ specimen originally erroneously described as the ♀ allotype of *namaensis* Hesse.

Length of body: about 1,88 mm

Length of wing: about 2,4 mm

Distribution

Namaqualand: Kamieskroon (Museum staff, September 1930).

Oligodranes elegans Hesse

Oligodranes elegans Hesse, 1938: 865.

The original description of this species was based on two specimens from Aus in South West Africa, in the British Museum (Natural History). These two specimens were taken to be ♀♀, but in view of the fact that the allotype of *namaensis* Hesse was mistaken by me for a ♀ on account of its broadly separated eyes and that a subsequent re-examination of this specimen, and the discovery of the real ♀ of *namaensis*, proved it to be a ♂ belonging to a previously unsuspected section of *Oligodranes* in which the ♂♂ have separated eyes as in a similar section of the genus *Apolysis*, it is more than probable that I confused the sexes and that the two ♀♀ of *elegans* may prove to be two ♂♂. This suspicion is supported by the fact that the ♂♂ of all the known South African species of *Oligodranes* are mainly or predominantly black and that the known ♀♀ have more extensive yellow colouring on the body or are even predominantly yellowish.

On the other hand the fact that the *elegans* specimens, according to my original description, have a more distinct medial frontal depression and also an anterior frontal depression however indicates a ♀ sex.

REVISED DESCRIPTIVE KEY TO ALL THE KNOWN SOUTH AFRICAN SPECIES OF

Oligodranes

♂♂

- 1 (a) Eyes in actual contact above for a relatively long distance, their upper facets distinctly much coarser than lower ones; frontal triangle or frons anteriorly usually more extensively pallid or yellowish or appearing yellowish in certain lights; legs (cf. Fig. 3C) usually relatively longer, more slender, the first posterior tarsal joint usually longer, distinctly more than half length of the tibia 2
- (b) Eyes broadly separated above, nearly or about 1½ to about 2 times width of ocellar tubercle, their upper facets not coarser than lower ones; frons in front not or less extensively pallid and, if yellowish at all, then only narrowly so along upper margin of buccal cavity; legs (cf. Fig. 3D) on the whole shorter, stouter, the first posterior tarsal joint sometimes scarcely, or only a little more than, half length of the tibia 5

- 2 (a) Hairs on body and legs shorter, sparser, less dense, more inconspicuous; knees distinctly much paler, more distinctly yellowish; line of contact between eyes not, or less, deeply impressed; palps shorter, not conspicuous, apparently much shorter than antennal joint 3; hind margins of tergites tending to be relatively more broadly pallid or yellowish 3
- (b) Hairs on body and legs distinctly longer, denser, much more conspicuous; knees darker, or at least not conspicuously pale; line of contact between eyes distinctly more deeply impressed; palps distinctly more conspicuous, apparently longer, almost, or about, as long as antennal joint 3; hind margins of tergites tending to be more narrowly pallid or yellowish 4
- 3 (a) Hind margins of tergites and sternites, especially former, not or scarcely, or only very narrowly, pallid or yellowish; veins in wings darker, more brownish; distance between middle cross vein and base of second submarginal cell distinctly, or much, longer than latter cell; middle cross vein usually at about, or less than, basal third of discoidal cell; palps slightly longer, subequal to, or only a little shorter than, antennal joint 3 ♂ *namaensis* Hesse
- (b) Hind margins of tergites and sternites distinctly more broadly, or more conspicuously, yellowish, sometimes even extensively so; veins in wings paler, more yellowish; distance between middle cross vein and base of second submarginal cell only a little longer, sometimes subequal to, even slightly shorter, than cell itself; middle cross vein usually at a little more than basal third of discoidal cell; palps distinctly much shorter, much shorter than antennal joint 3 ♂ *triseriatellus* sp. nov.
- 4 (a) Integument of frontal triangle and upper part of genae, sides of face and genae pallid or yellowish; knobs of halteres entirely whitish or pale yellowish; middle cross vein in wings slightly farther away from base of discoidal cell, at about between basal third and fourth; apical stalk of anal cell relatively shorter, much shorter than apical cross vein of discoidal cell; veins in wings paler, more yellowish ♂ *puberulus* sp. nov.
- (b) Integument of frontal triangle, sides of face, and upper part of genae black, but with greyish white or pale tomentum; knobs of halteres darkened above; middle cross vein in wings slightly nearer base of discoidal cell, at only about basal fourth; apical stalk of anal cell relatively longer, only a little shorter than apical cross vein of discoidal cell; veins in wings darker, more brownish ♂ *flavifemoris* sp. nov.
- 5 (a) Humeral angles, upper pleural parts, postalar calli, and narrow hind margins of tergites and sternites distinctly pallid or yellowish; antennal joint 1 shorter, scarcely, or only a little, longer than joint 2; palps shorter than antennal joint 3; proboscis slightly shorter, a little less than 1,5 mm; wing-veins slightly darker ♂ *anomalous* sp. nov. (= ♀ *namaensis* Hesse)
- (b) Humeral angles, pleurae, postalar calli, and hind margins of tergites entirely black like rest of body, only hind margins of sternites obscurely, very narrowly pallid; antennal joint 1 longer, quite 1½ times length of joint 2; palps longer, quite as long as, or even slightly longer than, antennal joint 3; proboscis slightly longer, quite, or a little more than, 1,5 mm; wing-veins paler, more yellowish *elegans* Hesse (if original specimens be ♂♂)

♀♀

- 1 (a) Body with much or more extensive yellow coloration, the greater part of frons, sides of occiput behind eyes, or even greater part of occiput, broadish sides of thorax in front of wings, postalar calli, even base of thorax, greater part of pleurae, entire scutellum, broad hind margins of tergites and sternites, and greater part of femora more extensively or conspicuously yellow; distance between middle cross vein and base of second submarginal cell in wings subequal to, or longer than, cell itself; hairs on body and legs distinctly shorter and sparser 2
- (b) Body mainly black or with distinctly less extensive yellow coloration, the greater part of frons, upper half of or entire occiput, greater part of thorax, even on sides, greater part of pleurae, entire or at least basal half of scutellum, and in some forms the legs, black, and only humeral angles, upper part of pleurae just below wings,

- narrower postalar calli, narrower hind margins of tergites and sternites, and in some forms the femora, being yellow; distance between middle cross vein and base of second submarginal cell usually shorter, or much shorter, than cell itself; hairs on body and legs distinctly longer and denser 3
- 2 (a) Occiput behind ocellar tubercle with a central dark band; base of frons or more often the middle and sides of frons usually dark or black; sides and base of thorax above distinctly less broadly or extensively yellow, the part on each side just above wing-base black and not continuous; yellow hind margins of tergites, though broadened on sides, distinctly much narrower, the black not tending to be broken up to form three longitudinal rows of patches or spots ♀ *namaensis* Hesse
- (b) Entire occiput behind ocellar tubercle and eyes and entire frons (excepting sometimes a narrow median spot or line at about middle) yellow; sides and base of thorax above distinctly more broadly and extensively yellow, the part on each side above wing-base continuously yellow, but above it with a rather conspicuous round black spot confluent with black discal part; yellow on abdomen much more extensive, the black basal parts of tergites tending to be reduced and broken up by the yellow to form three longitudinal rows of black spots or patches, becoming smaller posteriorly ♀ *triseriatellus* sp. nov. (and forms of it)
- 3 (a) Frons anteriorly, lower half of sides of head behind eyes, humeral tubercle, postalar calli, hind part of scutellum, propleural part, middle and hind part of pleurae, and hind margins of tergites and sternites pallid or yellowish; interocular space on vertex at least $2\frac{1}{2}$ times width of ocellar tubercle; veins in wings darker, yellowish brown or brownish; knobs of halteres entirely very pale yellowish white to ivory whitish; hairs on body slightly denser and longer 4
- (b) Head and body, especially thorax, scutellum, pleurae, and abdomen above, entirely black, only narrowish or obscure hind margins of sternites pallid; interocular space on vertex narrower, only about 2 times width of tubercle; veins in wings more yellowish; knobs of halteres more yellowish or even tinged slightly brownish above; hairs on body sparser and shorter *elegans* Hesse (if original specimens be ♀♀)
- 4 (a) Legs entirely dark or blackish brown, only apices of coxae and extreme apices of femora yellowish; head below mainly dark or black, especially hinder half; yellowish hind margins of tergites distinctly narrower, very much narrower than half length of tergites; antennal joint 1 appearing shorter, usually less than twice length of joint 2; wings scarcely or not faintly tinted milky whitish ♀ *puberulus* sp. nov.
- (b) Legs with the greater part of, or entire, coxae and femora yellow, only upper surfaces of front and hind femora basally and apically, or only apically, darkened to a variable extent; head below mainly or entirely yellowish; yellowish hind margins of tergites distinctly broader towards apex, almost or only a little narrower than half length of tergites; antennal joint 1 slightly longer, at least twice length of joint 2; wings distinctly, though faintly, tinted more milky whitish
♀ *flavifemoris* sp. nov. (and forms of it)

SUMMARY

In this paper 14 species of the genus *Phthiria* (subfamily Phthiriinae) are dealt with and of these 9 are described as new. A new variety of an already described species is added. Supplementary redescriptions of some species, previously inadequately described or described from one sex only, are given, and the synonymy of some others, described by me in 1938, is established.

In the two genera *Apolysis* and *Oligodranes*, which Hull transferred to the subfamily Usiinae in 1973, 12 new species of the former and 4 of the latter are described. As in the case of *Apolysis* it has been found that the ♂♂ of some South African species of the genus *Oligodranes* are dichoptic like the ♀♀.

To supplement the descriptions three figures portraying heads, antennae, wings and legs of some species are given.

Revised and descriptive keys to all the known South African species of the three genera dealt with are also given.

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